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THE EARLIEST OX-WAGONS IN TANGANYIKA

An Experiment which Failed

PART II

by Edwin W. Smith

By 6th June, 1877, the sections of two wagons and eight carts, the twenty Cape bullocks and a quantity of stores had been conveyed in dhows from Zanzibar to Saadani, where Bwana Heri placed a house at the disposal of the party. Two days were spent in jointing and bolting together the sections of the vehicles; and on the 9th Price, Thomson and Dodgshun went with one of the carts six miles to Ndumi where they selected a site for a camp a quarter of a mile north of the village. Standing on a hill 360 feet above sea level this promised to be more healthy than insanitary Saadani. A few days later all the party assembled there; and plying back and forth, their vehicles brought in the stores as they were landed at Saadani.

Price insisted upon punctuality for the staff as well as for the men: he could not expect the Africans to keep to rules that the Europeans disdained. He instituted a bugle-call at sunrise and a roll-call for all alike. After a cup of coffee, work began and went on till ten o'clock when they had breakfast, followed by prayers. At midday all retired for a siesta, after which there was another spell of work till 5.30 when they had dinner and evening prayers. This routine was frequently broken by sickness and interrupted by rainy weather.

After Clarke joined them Price called a meeting to discuss, among other matters, the allotment of duties. "The deliberations", he reported, "were most amicably conducted." Price and Thomson, it was agreed, would have the general management; Hore the duty of scientific observations and care of the property; Dodgshun to have charge of "the officers' mess" and be the accountant and Clarke of the men's commissariat; Hutley to attend to odds and ends of work and make himself generally useful. These were particular duties: all would work as a team, doing whatever was necessary.

The responsibility of leadership weighed heavily upon Price. He displayed the qualities which the position demanded. He did not lead from the rear, but was foremost in activity. A firm disciplinarian he was gifted with the grace of appreciation: his journals contain many such remarks as: "Hore is a first-rate fellow. . . . He is a most laborious fellow; I never saw a better worker; he is worth his weight in gold to us." He shared his thoughts and misgivings with them all and listened to their advice, even if he did not always act upon it. He carefully fostered regular religious exercises, and not in any formal manner, for he knew full well that only in conscious reliance upon God could their difficulties be overcome. Constitutionally liable to fits of despondency, he confided his blackest doubts and fears to his journal and presented a serene front to his colleagues, even when he did hide not the naked truth from them.

When all the stores from England arrived Price surveyed them with dismay: how were they to be transported 700 miles to Ujiji? The Directors had stinted no expense in fitting up the expedition: indeed they had erred on the side of extravagance. One wonders who had been responsible for the selection of many of the articles; certainly it was not Price or Thomson or any other person who had ever travelled behind a team of oxen along a rough road. For example, each member had been furnished unnecessarily with a commode, mahogany framed, with earthenware pan: owing to bad packing some of the pans were broken. Instead of common bush lanterns eighteen luxurious lamps with glass chimneys that would not stand a single night's jolting in a wagon were provided. Price had specifically asked that a blacksmith's bellows and not a portable forge should be sent; but a so-called "portable" forge with heavy iron hearth and frame, altogether too weighty and unwieldy for their light wagons, had been substituted.

Two large earthenware filters arrived cracked. Bottles of drugs were either broken or their labels detached; their contents were mixed up together and so useless. When all damaged and unsuitable things had been put aside there yet remained a mass of goods—3,000 lb. weight—beyond the capacity of their two wagons and eight Yorkshire carts: there were no drivers for the six Deccan carts still lying at Zanzibar. They decided to take with them all provisions, tools, house-fittings and the boat-gear except a large rope and heavy anchor, and entrust the remainder to the care of Bwana Heri. In addition, a considerable stock of calico (*merikani*), brass-wire and beads had to be bought in Zanzibar for purposes of barter. They decided to try the experiment of introducing currency for purchasing necessities on the journey; they found in later weeks that the 1,000 rupees and 2,000 pice were readily accepted and wished they had taken more. But barter-goods were still an essential part of a traveller's outfit: how were these to be conveyed in their over-loaded vehicles? They must fall back upon porters to carry what was indispensable for the first part of the journey and find some means of transporting the bulk to Mpwapwa.

They were relieved when a trader named Broyon, who had made several trips into the interior and had lived at Mpwapwa for some time, came with a letter of introduction to Price. He was fascinated by the prospect of wagon transport. The news of Price's experiment of the year before had reached the ears of the powerful Mirambo, chief in the country south of Lake Victoria, and he had charged Broyon to get him six carts. It was arranged that Broyon should take over the six Deccan carts and when he had trained oxen should independently convey the barter goods to Mpwapwa. He entered with enthusiasm into the contract. As for tsetse on the road, he laughed the idea to scorn.

It had yet to be seen whether the twenty oxen brought from Natal would be able to live and work in the different climate of East Africa. They were intended as the nucleus of teams to be trained at Ndumi. Not less than a hundred all told were required. Horned cattle did not flourish on the coast: they had to be brought down from the interior. Price secured some at Saadani, some at Ndumi, some at Zanzibar, until he could say on 5th July: "We have now altogether 98 oxen, with a goodly proportion of good-sized ones." In the training of them the South Africans proved of great value and all hands turned out to help.

The men who had hitherto worked so willingly now began to give trouble. Crawley, the white South African, was so insubordinate that Price had to dismiss him. Even Juma, Price's personal servant, rebelled when one morning he was

asked to stand by some oxen while the driver was having his breakfast: it was not his work, he said. Reasoning with him was ineffectual: he demanded his pay and when Price refused, the other Zanzibaris went on strike. This led to unpleasantness with Thomson and Dodgshun who argued with the men and persuaded them to stay. The spectacle of two colleagues intervening to argue with obstreperous servants when he had spoken his mind seemed to Price to be subversive of his authority and he said as much to them, rather warmly. He took Juma back to avoid complications.

It can rarely have happened in tropical Africa that six Europeans have travelled or lived together without quarrelling. Burton and Speke were not on speaking terms for weeks together. The unhappy relations among Livingstone and his colleagues during the Zambezi expedition are well known. All the evidence we possess goes to show that Price and his colleagues worked harmoniously together with a minimum of friction. If an exception is to be made it is in the case of Thomson. Price says very little of it in his journal, but reading between the lines it is easy to see that Thomson was often a thorn in his side. Thomson had told the Directors before leaving London that he was not satisfied with his position—that had he known what it was to be, he would never have come home to join the expedition. He revealed his resentment when at Ndumi he claimed that one of the two wagons and one of the tents should be allocated for his exclusive use.

On Sunday, 29th July, they held their usual service and added the Te Deum, Confession and Lord's Prayer translated by Bishop Steere into Swahili. Next morning they trekked out from Ndumi and made half a mile. The South African men were showing signs of breaking down in the unaccustomed climate: only four of them were in working order, four barely able to do a little, two unable to walk. One Swahili ox died in the yoke; some of the others were sick. One native team got on pretty well; the other not at all. The day's experience was not promising. "It is at last quite evident to us all," Price wrote that evening, "that to attempt to get on with our nine vehicles is worse than useless, owing particularly to the ill-health of our colonial servants." They decided that it was necessary to leave four carts behind and the load of a fifth. "It is disappointing and discouraging to be unable to accomplish this work in the way the Directors intended; but stern necessity, which we rejoice to believe our Heavenly Father is placing upon us, is compelling us to adopt a much more limited and practicable method of carrying out the work and one which ought to have been adopted from the first." Their plan now was to go forward with two wagons and three carts as far as Mpwapwa, set up temporary buildings and stay there through the rainy season, and then let some return to the coast to fetch the stores left at Ndumi. Bwana Heri lent them the largest house in Ndumi for the storage of their goods.

On 1st August they covered five miles in five hours—"very satisfactory" Price thought: next day only two miles in four hours. "The exertions of today and yesterday were monstrous." They then came to a dense jungle through which Mackay had cut a road that was good for carts, but he had followed the winding foot-path too closely: a long team of oxen found the turnings too short and the vehicle behind them crashed into trees. Mkangi was reached after a trek of four hours.

They were now overtaken by a party of Roman Catholic missionaries: "They were most enthusiastic about the road we have left behind and highly delighted with our mode of travelling".

Before reaching Makuru on the 6th they came to an ugly deep gully over which Mackay had thrown a capital wooden bridge. When all the vehicles were safely over, the whole party gave three cheers for the engineer. They were brought to a standstill by a broken disselboom.

Between Makuru and Pamagombe they had "a glorious day of travelling" over a tract that was exceptionally favourable for wagons, and made seven miles in 4½ hours. The local inhabitants, the Waseguha, were "a most friendly and interesting people": wondering crowds flocked to the wagons and followed them for a long distance. Food in plenty could be purchased with cash—"an important step in the right direction." From Magubika to Kikwazo the going was irksome owing to forest and long grass. Mackay had cut the banks of two ravines, making the passage easy. On the way to Kwedigwami the oxen were in the yoke from 8 a.m. to 5 p.m.—a long day for them. Mackay's road through the valley was excellent, but over the high wooded ridge of little use. In the nine hours they did seven miles. "This is progress", Price noted. On the 15th they came to Kwamere after crossing the Mohangazi river by a very fine drift made by Mackay. They were not so fortunate when they came next day to the Rukigura river. Price was driving his wagon, because the driver was ill, and got through Mackay's drift with ease, but the other vehicles stuck and he had to go back with his team to help them out. He drove his wagon through heavy rain next day to Matungu, nearly five miles: the only incident was that the front wheel fell off. They rested at Matungu for Sunday (the 19th) and Price in his sermon "addressed the Kafirs on the subject of their indolence."

The country was now open and allowed them to travel at a good rate. Hore missed his pipe and sent his servant back along the road to look for it. He came upon a lion that was engaged with the carcase of an ox which had fallen out and died. He was carrying his master's gun but did not know how to use it. All he could do was to point it at the lion and shout: "*Ndoka*"—go away; and go away it did.

Between Makungu and Kidudwe stretched a region uninhabited and waterless, but beautifully open and easy. They trekked through a splendid moonlit night, delayed only by the breaking of a disselboom: when a new one had been fitted the linch pin of the same cart came out, the wheel dropped off, damaging the cart. They arrived at Kidudwe at 3 p.m. on the 21st. Next day they came to the Mvue river near its junction with the Wami. Mackay had put in a lot of work there but not enough for the long-teamed wagons and they had to cut away a big slice of the bank. On the farther side they encountered a great patch of tremendously long grass, mixed with a climbing weed (*phupu*) which bore a bean covered with a thick fur which, on touching a man's body, produced a "most fearful burning itch." At this point they overtook Mackay who turned out his men who, with their cutlasses, cut a way through the barrier.

On 27th August they had—Price wrote to his wife—"a bit of very novel experience".

"We were crossing a bit of a valley; the three carts were in front, and passed through all right, but the first wagon happened to cross a hole in which there was a bees' nest; just at this moment, or immediately after, the same wagon ran foul of a stump and stuck; the whole swarm of bees turned out and made an onslaught upon men and beasts. I had just gone on to see one of the carts out of the valley; when I turned round to go back to the wagons, the first sight I saw was the leaders and drivers bolting as hard as they could, and the oxen leaping about in the wildest confusion. The team of the front wagon was out of the main body of the swarm, but the second team was in the thick of it. They rushed round to one side, making me tremble for the pole. It was very strong, however, and the poor oxen so entangled one another in their madness to get away that very soon they could move neither the one way nor the other, and I was afraid that half of them would be strangled. I shouted to the men to go and cut the reim (strap) that attached the chain to the pole, but none responded. Of course I thought them cowards, and at once set out to show them an example of bravery. I had nothing but my shirt and trousers on, with hat and boots of course; I rushed up knife in hand; but alas! just as I reached the spot, I was so beset by the angry bees that I too had to bolt for my life and leave the poor animals to their fate. Unfortunately, I took off my hat, and thought to beat them off with it, but in a moment my bare and pretty closely shaven head was literally covered with bees. I rushed wildly through grass and bush till I came upon two of our Waswahili men, who had taken shelter at a distance from the scene of the onslaught: they at once saw the plight I was in, and each cut a green branch, with which they battered my head, nearly beating out my eyes, till all the bees had been got off: you will readily believe I was in a heat; it was something perfectly awful. But the poor oxen were in the heat of it still, and had resigned themselves to their fate, only groaning pitifully. It was some minutes before I could get half a dozen of our Waswahili together to set fire to the grass, and to set the oxen free. Hore was there with them and tried like myself to do the brave; but with no better result. At last however with the aid of the fire and smoke, we got the poor brutes loosened, and then they rushed away like mad; they were covered with blisters or lumps. In the course of time we got them collected again, and I had the yokes carried to a distance from the wagons to inspan them again. This being done, we took them to the wagon and with some difficulty we attached them to it and moved off. . . . The poor beasts had been so stung by the bees, the sun was so blazing hot, that it was with the utmost difficulty we could get them along at all."

They camped that day on the banks of the Zingwi river—"a splendid mountain torrent, as wild as you like, and clear as crystal." The fatigue of travel was telling upon them; almost all were ailing. "I have myself", Price wrote, "tonight taken a good handful of quinine, and it has made me quite drunk; but thank God I have no symptoms of fever yet, but I am dreadfully tired."

They had made considerable progress but disaster was dogging their steps. On the 29th Price recorded that only ten of the Natal oxen were alive, and one of these was so sick that it had to be left at a village. Of the ten South Africans only four were fit for work. "Besides a heavy load, I had in my wagon yesterday three native invalid passengers, and more tried to find room, but could not:

can you picture us at all? It is most doleful, and yet we are pushing on, taking encouragement from every little favourable event, and endeavouring to believe that our Heavenly Father will ultimately give us success."

On the 30th they left Mvomero and entered the diversionary road that Mackay had made: it looked good and Price could say "I had the luxury of walking the whole way without even putting my shoulder to the wheel." At the junction of the Mkundi and other streams there was a wide stretch of soft sand and it was hard work getting the vehicles through. On the farther side they were confronted by a patch of impenetrable reed, about half a mile in extent. There was nothing for it but to outspan and cut a road through. Price's driver, Cornelius, overstrained himself at this labour and became very ill, so Price had to buckle to again. It was desperately hard work to get through the reeds, for the way they had cut was narrow and there was no getting near the oxen to drive them on. They did get through and late in the afternoon arrived at the villages of Mangubungubu where they rested over the week-end. Price spent most of the following day in putting new soles on his only pair of boots. They had their usual Sunday service and a little extra feeding. Lately, meat being scarce, their diet had consisted almost entirely of Kaffir-corn porridge. Now Mr. Hore made a roly-poly pudding and the dough which was over he turned into dumplings which they ate with their soup—"a very palatable dish."

Beyond them lay fifteen miles of desert, waterless, but open and flat: they traversed it in nineteen hours: "this would not be very bad travelling even in South Africa". So they came to Msoero and drew up their vehicles in the centre of the village –"without exception, the neatest, cleanest and best constructed village" they had hitherto come across. The inhabitants were Makua who had migrated from near Kilwa, on the coast. There was abundant food.

They had now covered 130 miles in 35 days from the coast and were more than half way to Mpwapwa. Summing up their varied experiences in a letter to Dr. Mullens, Price described the ecstasies with which they had made rapid strides over level and open plains, and then labouring to the verge of despondency to get over the mudbanks of rivers, of being half-suffocated, half-maddened by the monotonous grass and burning weeds of the Nguru valley.

They had now reached what—he told Dr. Mullens—he thought to be "a most important crisis in our expedition." After much careful thought and looking at matters from different points of view, they unanimously decided to divide forces. Thomson, Dodgshun and Hutley, with two vehicles, three of the South Africans and about half the porters were to go on to Mpwapwa. Two of the party would remain there while Thomson returned to Msoero to fetch the two carts left there. Price, Hore and Clarke were to travel back to Ndumi, with one wagon, three spans of oxen, seven South Africans and fifteen porters, to bring up the carts and goods that had remained there.

Price and his section started from Msoero on 7th September. It is not necessary to relate in detail what happened to them on the road. As always Price walked in front or by the side of the wagon; at night, while Clarke slept in the wagon, his bed was made up alongside, his faithful Juma being careful to keep fires burning because of lions. Hore had gone ahead and they found him at the Mvue river trying with his men to make a dug-out canoe from an enormous

tree which they had cut down, his purpose being to explore the Wami river. He had overdone himself and was down with dysentery and did not need convincing that his project would have to be abandoned. They put him in the wagon and moved on. Their pace was more rapid than on the previous journey but this was achieved at the cost of great labour.

A still more vexatious matter was the death of so many of their oxen. The last of their Natal bullocks, the best of the lot, got to Ndumi with difficulty and died after arrival, thus leaving them (said Price) to depend entirely upon "these wretched Swahili cattle" and many of these showed signs of breaking up. Reflecting on his late experiences, Price wrote: "The fact that we have taken considerable loads a distance of 130 miles into the interior, returned the same distance again without any interval for rest and doing the return journey in sixteen days seems fully to show that traffic with bullocks is practicable, but the fact that they are now dying seems also to show that bullocks cannot stand long continued work in this climate."

He began to fear that their enterprise was destined to be a failure. Others, he found at Saadani, were nevertheless bent upon following their example. A Hindu was driving a little cart with two bullocks. Roman Catholic priests were having carts made at their mission in Zanzibar preparatory to opening a station in Nguru. "They are going the right way to work", said Price. They aroused in him no denominational envy, only a feeling that they were right in their strategy of penetrating gradually into the interior. Alexander Mackay was there too, training bullocks in preparation to go to Uganda with light carts. The trader Broyon was now on his way to Mpwapwa with seven carts each loaded with 1,000 lb. He had shown great energy and skill in training bullocks. The heterodoxy of his technique amused Price, for he and his men dispensed entirely with such superfluities as reims for all the oxen, except the leading pair; they caught the oxen and pulled them into the yoke by their horns, or if they had no horns by the ears. "I should like to see them handle our wild oxen of the south," Price remarked.

All this appeared encouraging. "A little more than twelve months ago", he wrote, "such a thing as working carts with bullocks was unknown in East Africa, now there are about twenty wheeled vehicles. It will be slow and imperfect work for some time, but it is a step in the right direction and I am convinced it will work wonders." So his feelings fluctuated from time to time, now hoping for ultimate success, now fearing the worst in the immediate future.

Clarke and Price were taken over to Zanzibar by Mackay in the C.M.S. launch *Highland Lassie*, to buy stores and enlist porters. He never felt well on the island: the climate seemed to take the pith out of him, whereas, he wrote to his wife, "on the mainland I am as full of energy as you like." Thinking that violent exercise would do him good he joined a party of ten men and a lady for a paper-chase on horseback.

Refreshed in spirit by this escapade and by the kindliness of Dr. and Mrs. Kirk at the Consulate, Price and Clarke returned to the mainland on 2nd October to find, as Price said, "things getting darker and darker." Aaron, one of the South Africans, died next day; two others were chronically ill. Cornelius, the best driver, after being rebuked for insolence, deserted but finding it impossible to

leave the mainland returned to duty. Oxen continued to die in quick succession—ten of the best in fifteen days. Price was sorely perplexed as to the cause of these deaths. He could not think it was tsetse. Since the dead and dying were the best and had done most work, he was driven to conclude that hard work in a bad climate was responsible; but this would not apply to the cattle left at Ndumi, which had done no work to speak of. They now had to take stock of the situation.

Price had consistently urged upon the Directors the desirability—nay, the necessity—of establishing the Mission in stages instead of leaping 700 miles from the coast to Lake Tanganyika. As we have seen, the Directors, while intending that the expedition should aim at reaching Ujiji, had yet allowed the men discretion to leave one or two of their number at an intermediate station between Mpwapwa and the lake. It would seem that this concession had not been communicated to Price and his colleagues, for they were fully convinced (as Price's writings testify) that it was the Board's policy not to halt short of the lake. If he had known of the liberty given to them Price would still have said that a station on the further side of Mpwapwa was too remote; he wanted one nearer the coast, in the well-populated healthy mountainous region, where men and oxen proceeding inland could rest and where the work of evangelization could be carried on by resident missionaries.

And now before leaving the coast again he poured out his soul to Dr. Mullens, reminding him that at the very beginning and again after his reconnaissance he had recommended gradual advance to Tanganyika.

> "It seems to me that in this determination to push right through to Ujiji the Directors have signally failed to benefit by costly and most disastrous experience in connection with a similar attempt in central South Africa eighteen years ago, in which I myself had a bitter share. I do not shrink from either the labour or the difficulty of getting through to Tanganyika. My 'marching orders' are to go through to that lake, and, God helping me, I doubt not I shall reach my destination in time."

But he could not refrain from reminding the Directors of how they had sent Helmore and himself a thousand miles to Linyanti when the countries of the Bamangwato and Bakwena ought first to have been occupied—and of what had followed. Now in face of the possibility of making a similarly grave error he felt it his duty once more to urge a gradual advance.

On 16th October the mail brought a letter from Dr. Mullens conveying full authority from the Directors for the expedition to halt during the rainy season wherever it was found necessary. This did not meet all Price's desires—there was to be a halt but not a station. But so far, so good.

"We came here three weeks today," Price wrote at Ndumi, 13th October, "well pleased with the journey down from Msoero, and having tolerably bright hopes with regard to our return journey. How different our prospects now! Twelve oxen have died since our arrival. Three more have remained in the veld this evening unable to return home, and we have probably seen the last of them. There are still five or six in a most wretched state, and will probably go. It is simply dreadful! I have spent a most wretched day, dreadfully depressed, and longing for some light on our path."

In view of the loss of oxen a change of plan was inescapable unless indeed they were to remain at Ndumi for some weeks to purchase and train new spans. They had to fall back upon human porterage. They at last got away on 18th October with 120 porters in charge of Hore, one lightly-loaded cart, and the three remaining South Africans—two had been sent home from Zanzibar. They took with them the twelve oxen that had survived of the 37 with which they had started from Msoero five weeks before. Eight of these—mere "scarecrows"—they had to leave at Pamagombe. The Chief of that place told Price that several of his cattle and some at neighbouring villages had died in an unaccountable way. "Can it be," he anxiously asked himself, "that our Natal oxen have brought any disease into the country?" He scarcely thought it possible, for he saw no trace of lungsickness or redwater in the dying cattle. Apparently, he never suspected that the deaths might be due to an invasion of the tsetse-fly.

The journey was uneventful though hindered by rains that were unusually early and copious.

On 28th October when they reached Mbuzini, near the Rukigura river, they met Thomson who had a doleful tale to tell. The advance party had been compelled to halt at Kirasa, 45 miles short of Mpwapwa, because of the deaths of so many of their oxen: out of 32 only 16 were alive and several of these were sick. What was to be done now?

The four men entered upon long and animated discussions which lasted three days. Clarke and Hore agreed with Price on the necessity of opening intermediate stations. Thomson thought that these should be postponed and would hear of nothing but pressing on straightway to Lake Tanganyika. After sleeping on it they arrived at a decision to recommend to the Directors that after the rainy season Price and Hore should press on to the Lake with the bulk of the stores carried by porters; that Thomson and Hutley should follow with lightly-laden vehicles; and that Dodgshun (who was not present) should join either the van or the rear, as he chose. Thomson was brought round to agree with the following paragraph in their report to the Directors: "But, in our opinion, the more practicable way of entering the interior would be by the formation of intermediate stations; and that such stations, not necessarily to be permanently occupied by agents of L.M.S., are an absolute necessity in view of the establishment of permanent missions on Lake Tanganyika". Thomson expressed his readiness to stay at Mpwapwa or elsewhere if the Directors accepted this plan. Clarke had now decided, in view of the uncertainties of the situation, to withdraw and return to his work in Natal; and his brethren asked him to go by way of England and lay their proposals before the Directors.

Next day Thomson requested that the resolutions should be annulled. He had changed his mind and now wished that priority be given to intermediate stations and that going direct to the Lake be adopted only if the Directors would not accept that plan. He vacillated now between one plan and the other and made suggestions that his colleagues showed to be quite impracticable. They were perplexed by the waverings of his mind until at last he came out with the truth. He told his colleagues plainly that he was not satisfied with a secondary position: he had served in South Africa on an equality of status with Price, and now would not endorse any plan which tended to prolong the present state of affairs. Whatever plan was now adopted he would no longer play second fiddle.

He would agree to intermediate stations only on condition that the plan was compatible with a change in his own position. A fresh document was now drawn up for the Directors, prominence being given to the intermediate stations. Estimates were drawn up of the cost of conveying the stores to the Lake by means of the carts and porters—Price thought that at least 600 of these would be required—the figures were "appalling" in his eyes. Finally it was resolved that while the others made a camp at Kirasa for the rainy season Price (and not Clarke) should take advantage of the enforced delay by going to London for consultation with the Directors.

Leaving Mbuzini on 31st October with eight porters carrying his tent and baggage, Price made rapid march in spite of torrential rain—the last day he did 25 miles: "a decent walk in a day anywhere, but in Central Africa it is something more, and especially for men carrying heavy loads, as mine were." He was in Zanzibar on 8th November.

It was with the utmost reluctance that he accepted his colleagues' decision; and now at the coast he received letters from Thomson asking him to return! Price confided his misgivings to his Diary:—

> "I have been in the most painful perplexity about this subject. All yesterday evening I was ill at ease and it haunted me all through the night in the shape of dreams. I sometimes fear that I may have allowed the mere fact of seeing my family to weigh too heavily in this matter, and yet God knows that I would at this moment relinquish the idea of going home if I could see my way clear without it. Going *home* has ever its attraction, but going to England in present circumstances is anything but attractive to me, but I believe it is for the good of the Mission."

Voyaging in the *Burmah* as far as Aden and transhipping there into the P. & O. steamer *Surab*, Price reached Southampton on 15th December and that same evening rejoined his family at Henley-on-Thames where they were now living. That day his eleventh child, Slater, was born.

When a few days later Price went up to London to interview the officers of the London Missionary Society he had a mixed reception: some greeted him heartily, the demeanour of others was decidedly cool. They confronted him with a letter from Thomson which shamed and confounded him for it cancelled the decisions taken at Mbuzini and which he had been commissioned to press upon the Directors. (He had reason to believe that neither Hore nor Dodgshun had seen the letter.) Why had he come home? It seemed "the most insane thing imaginable." He felt that the letter compelled him to stand on the defensive and to open a discussion which could not be other than disagreeable.

When he attended a full meeting of the Directors on the 20th he was received more cordially than he had expected to be: there was some applause when he entered the room. He was told to speak for fifteen minutes, after which he would be questioned. He begged leave to read a statement which he had prepared, detailing the discussions at Mbuzini and speaking his mind about Thomson's letter. He was assured that his self-defence was uncalled for and that the letter did not make his return look foolish nor as a whim of his own.

Price opened his diary for 1878 with these words:

> "Henley, 1st January, 1878. Another year has passed—to me the fullest of responsibility and anxious care and hard toil of any that I have lived. God knows that I have laboured honestly and hard to make the Central Africa expedition a success, but what with the large scale upon which the Directors chose to organize that expedition, the decision to go through to Tanganyika if possible without halting, or at any rate without forming any intermediate stations, and the unaccountable mortality of our cattle which has brought the expedition to a standstill, we are compelled to admit that the scheme has been a failure so far."

He was still confident of ultimate success if only different plans were adopted.

He had met the Board again on 31st December and was made sensible of a cooling of the atmosphere. Many of the Directors it was evident, were grievously disappointed and inclined to throw the blame of failure upon him. The death of the cattle puzzled them: some seemed to think it was all his fault. The matter, after long consideration, was referred to a sub-committee which met on 3rd January. Price outlined a plan of establishing a chain of stations between the coast and the lake. He was hotly cross-examined; and at the end the general sense of the committee seemed to be in favour of pressing on to Tanganyika with porters and carts. Price was asked to prepare an estimate of the cost of a caravan to convey 15,000 lb. of stores. Finally at the Board meeting on 18th February after the report of the sub-committee had been considered, it was resolved: "The Directors still consider the Lake the goal of the expedition, but they are prepared to accept Mirambo's town as another mission station." And as to Price himself:

> "That considering the present compact form of the expedition and the importance of curtailing the expenditure, already heavy; considering the excellent advance already made and the experience gained even by the youngest members of the Mission; remembering also that his appointment to the expedition was but temporary and for a special purpose, the Board are of opinion that the experience and advice of the Rev. Roger Price are no longer so necessary to the advance of the expedition as they were at the outset, especially when the road yet to be traversed is as new to him as to the other brethren; and therefore with warm thanks to Mr. Price for the zeal and energy he has displayed in guiding and helping the expedition hitherto they think it unnecessary that he should return to Zanzibar."

One Director asked pertinently whether the reasons assigned for Price's dismissal were the real and only reasons, or whether there was some concealed motive. He was assured that there was no other reason. But there was no hiding of the fact that a divergence of views existed. Price had consistently adhered to his conviction as to the necessity of gradualness. The Board still considered Ujiji to be the goal of the expedition, but modified their plan to the extent of allowing an intermediate station to be opened at Mirambo's. This concession did not meet Price's objections, for Mirambo—the notable Chief whom H. M. Stanley had joined the Arabs in attacking seven years before this—was about 600 miles from the coast and Price wanted stations nearer. Abundant assurance was given him, both during and after the Board meeting, that he had

the entire confidence of the Directors. But their decision struck him to the heart. Once again, it seemed, the coils of frustration had crushed his worthy ambition to be a crusader for the Faith. He returned to his station in Bechuanaland.

It is pertinent at this point to quote the judgment of the official historian:

> "It is to be regretted that this scheme of intermediate stations was not more seriously entertained and strenuously advocated on the Board. For experience had rendered it practically certain that had this course been adopted, many lives and much expenditure might have been saved. By this means the work also would in all probability have been placed much earlier upon a sound basis".*

Roger Price at least cannot be accused of having failed to recommend this course: from the very beginning he had not wavered in its advocacy.

When the news reached them that Price was not returning, Hore and Dodgshun expressed their sincere regrets. Dodgshun wrote to Dr. Mullens from Kirasa, 15th April, 1878, that he deeply deplored the loss of Price both on public and private grounds.

> "I shall never cease to be thankful for the very few months during which I had the pleasure and advantage of his companionship and counsels. I cannot yet feel that the true interests of this important mission will not suffer from the lack of his experience and skill and still more of his genial brotherly kindness to us younger members of the Mission."

There is no need to dwell here on the later history of the expedition: it has been told by Hore in his book *Tanganyika*. Clarke returned to Natal. The other four men, Thomson (now leader), Hore, Dodgshun and Hutley, built a temporary camp at Kirasa, near the Mukondokwa river and remained there for the rest of the rainy season—exceptionally heavy that year—after Hore and Dodgshun with 150 porters had brought up more stores from the coast. Some of the stores were conveyed by oxen to Mpwapwa, but there the vehicles had to be abandoned because all the oxen died. Moving on with porters on 29th May from Kirasa, and leaving Dodgshun at Mpwapwa (where the C.M.S. had in August, 1876, opened a station on the way to Uganda) in charge of a portion of their outfit for which no transport was available, the other three men pressed on and after a most difficult journey reached Ujiji on 23rd August, 1878—more than a year after they arrived in Zanzibar. Within a month Thomson, who was so ill that he had to be carried in a hammock part of the way, was dead. Dodgshun arrived in the following April, completely exhausted after a tedious journey of seven months and vexatious happenings, and died a few days later.† Until they were reinforced Hore and Hutley heroically carried on the work alone; Hore made a minute survey of the Lake.

It is worth recording that Price had a conversation with H. M. Stanley in London, February 8th, 1878. The explorer thoroughly approved of intermediate stations, but was decidedly against making Ujiji the headquarters of the Mission: it was, he said, too thoroughly imbued with Arab influence. He recommended rather a site at the south-western end of the Lake—in the region where subsequently Niamkolo was built to take the place originally held by Ujiji.

*R. Lovett, *The History of the London Missionary Society* (1899) vol. 1, p. 651.

†See *Tanganyika Notes and Records* No. 37, "A European Graveyard at Kigoma" by Sir John Gray.—Ed.

This story tells of the failure of an experiment which, if it had proved successful, would have been of major value in the opening up of East Africa. "The failure", Hore asserted, "was entirely that of the oxen, for as regards the vehicles, the road and the men, all difficulties had been overcome. Where no road existed it was made. Where obstacles occurred they were boldly attacked and overcome. Rivers had been bridged, jungle had been cut through, rocks had been thrown aside". Nor was it only the imported South African oxen that succumbed. Broyon, whose early success with local cattle had so encouraged Price, struggled on slowly as far as Kirasa, but lost nearly all the oxen he started with. Mackay's gallant endeavour came to a similar end. With his colleagues Copplestone and Tytherleigh, he started from Saadani with four carts and about 90 oxen, bought and trained locally. In a short time he was congratulating himself on being more fortunate than the L.M.S. party since he had lost only twenty oxen. By the time they reached Mpwapwa only 52 oxen were alive and these were so sick that they could not be driven farther. All three efforts failed, and all on account of oxen.

Why did these beasts die in such numbers? Mackay said that his fifteen fine large-humped Nguru oxen were afflicted with red- or blackwater, diseases said to be due to overworking. Price, who was well acquainted with cattle diseases makes no mention of these two. He noted in a letter written at Ndumi, 7th October, 1877:

> "I can give no reason for the death of these animals, except it be that they cannot stand long-continued work in this climate. I come to this conclusion because I see that most of those oxen which did but little work are still in good order. Then, too, the amount of beating which they seem to require in order to get any work out of them must be very injurious to them in this fearful climate, although they do not get a bit more than oxen do in the south. Another cause of disability is the stumps of burnt grass and reeds, and the many wood stumps hidden in the long grass. Their feet often get wounded by treading on these, and they are often lame for weeks and in some cases have died from these wounds."

He had previously written (Ndumi, 27th July, 1877): "Several of the oxen we have bought here are either dead or dying—of what we cannot make out; for they look perfectly healthy when they are cut up." Again, next day: "It is not the Natal oxen alone, but the Swahili oxen are also going—i.e. several have died, or been killed to save their lives; and one is very sick tonight. It must be something in the grass of this place". Thomson noticed that when an ox's coat roughened it invariably died. Broyon suggested foul play on the part of the Arabs: that they bribed local people to poison the cattle because they were opposed to the new form of transport: but the others scouted this idea.

Hore in retrospect assigned three causes: the want of nourishing grass; the exceptional hard work; and the tsetse fly. Tsetse, he said, was probably the chief cause.

At that time little was known about the tsetse, particularly about the prevalence of it in East Africa and the nature of the disease it conveyed. Livingstone, who in 1851 lost 43 fine oxen in the neighbourhood of the Chobe, meticulously recorded the symptoms produced by the bite of the species named

Glossina morsitans: the running of eye and nose, the staring coat, the swellings, emaciation and peculiar flaccidity of the muscles, purging, and finally death in a state of complete exhaustion. He noted the condition of the internal organs, and particularly that the blood was so scanty that it scarcely stained the hands in dissection. He took these symptoms to indicate a poison in the blood, the germ of which enters when the proboscis of the tsetse is inserted to draw blood.*

It seems passing strange to anyone who, like the present writer, has travelled in tsetse areas, has heard its peculiar buzzing and felt its bite and seen his cattle wither away after being bitten, that travellers should traverse such a region and be unaware of the tsetse fly's presence. Yet some have failed to recognize it; and some have taken biting flies to be tsetse that are not tsetse.

Roger Price was very familiar with tsetse and the disease: in Ngamiland he watched his oxen die one after the other after being exposed to the fly. Yet he mentions tsetse but once in his East African diaries and that only to dismiss it. Thomson may have seen tsetse and its effects in South Africa; yet he wrote to Dr. Mullens on 21st January, 1878: "Of all our oxen which have died I have not seen one distinct symptom of fly-bite—I mean the tsetse." Price, as we have said, cut up some of the carcases and found them quite healthy.

Yet it would appear that some species of tsetse inhabited the area through which the expeditions passed. The absence of cattle from some of the villages along the route may well have been an indication that the fly was present. Thomson caught a fly biting an ox and sent it to Dr. Kirk for identification, but unfortunately it was lost on the way: Thomson said it differed from the tsetse he had seen in South Africa. Later he reported that Dr. Kirk had asked Hore to collect biting flies and that all these proved to be tsetse: but some were not *G. morsitans*. And (somewhat maliciously) he told Dr. Mullens that Dr. Kirk blamed Price for not having seen the fly and put on him the responsibility for the loss of cattle.

Alexander Mackay's evidence is important. When making his road in 1877 he avoided a reedy patch near Lake Gombo because it might harbour tsetse, "the place being full of rhino." But said he: "I found no tsetse." By way of experiment he bought an ox in the Mkondokwa valley and though for a month it fed daily by the river side, it showed no sign of having been bitten. He believed then that a few tsetse inhabited two points on the road, especially in the wet season.† In February 1878, during his last march with oxen, just before reaching Mtungu he found grey flies in fearful numbers and also a large yellowish fly that buzzed loudly and stung painfully. "Neither of these flies is *Glossina morsitans*. Specimens of similar flies caught by Lord Coke near Kitange last year were reported by Dr. Kirk to be *glossina* but not *morsitans*." There was, he wrote, "a terrible visitation of *vipanga*—a sort of tsetse fly that bites man and beast". The true tsetse escaped his notice among the enormous number of similar flies. "Judging from the great length of tract in which we were pestered by the *terebinse* and during which our oxen were fatally bitten, I believe the tsetse region is, on our line of road, some 30 miles broad at least, or from a little west of Mgubika to the middle of the Kidudwe *pori* (desert). If these limits are correct

*David Livingstone, *Missionary Travels* (1857), pp. 80 sqq.

†*Church Missionary Intelligencer*, November 1877, p. 650.

it is evidently impossible to use bullock-power on this part of the road, the tract being too broad for oxen to pass it in one night. . . . There is certainly another tract of fly between Mvomero and Msoero." Mackay said that he had observed one or two symptoms of *nagana*, but many of the most distinctive symptoms were absent in his cattle which died. He did not believe that all the deaths were due to any one cause.

Price made no allusion in his letters and diaries to the plague of biting flies upon which Mackay dwells: was he unobservant, or impervious? Were the flies—tsetse included—there when Mackay passed and not there when Price preceded him? The tsetse does migrate, we know. It may well be that what Semagombe told Price in October, 1877, of his and neighbouring cattle dying in an unaccountable manner was an indication of the movement of the fly. What is inexplicable is that if his oxen were stricken by tsetse Price noticed no sign of trypanosomiasis. It may be—as has been suggested to me by one authority—that the cattle, although they most certainly must have been bitten by tsetse, died of East Coast fever. This would apply especially to those brought from Natal and also probably to those bought and trained on the coast. East Coast fever would kill an animal quicker than trypanosomiasis and the symptoms are quite different and much more severe.

The final verdict was pronounced in 1881 by Dr. John Kirk: the presence of tsetse after the first forty miles from the coast makes hopeless any attempt to use horses or bullocks for transport.

A HISTORY OF THE SONGEA NGONI

By P. H. Gulliver

INTRODUCTION

Few Ngoni today understand much about their history before the time when their grandfathers arrived in the Songea region; and the number who do remember reasonable versions is decreasing as the generation of the pre- and early German era dies out. The modern young and even middle-aged men are coming to know little and to care little, in contradistinction with their fathers who felt with good reason that early Ngoni history was of great importance. Consequently, my remarks on the earliest years, before the Ngoni reached the Songea region, are compiled mainly from already published sources, and the interested reader is especially referred to J. M. Winterbottom's account (Rhodes-Livingstone Journal, ix, 1950, pp. 14–20) for a fuller version of the rise of "the terror of Central Africa", as Livingstone once described the Ngoni.

Native history is commonly not merely an account of the past, or even an analysis of it, but is an explanation, rationalization and justification of the tribal, political and social system. This is certainly so for the Ngoni. The historical migration, conquest and rise to power of the Ngoni justifies as well as explains the authority and rank of certain families and the lowliness (formerly servitude) of others; and it explains the gradation of rank and status through the tribe, and rationalizes the pyramid of allegiance from the commoner through to the chief himself. For the Ngoni themselves, to quote the historical processes is to explain entirely satisfactorily the system of land-holding and the lack of territorial boundaries in which personal bonds between the chief or a headman and his people are all-important. An appeal to history is made to explain and justify the particular nature of such important Ngoni institutions as chiefship, the clan system, marriage and the like. History, that is, becomes a set of precedences for the people.

This attitude to and use of history is not, of course, restricted to pre-literate peoples. It comes from a common belief, backed by human conservatism, that a traditional precedent establishes a moral obligation to be followed today. On the other hand, people have ambitions and desires in the present and an eye to their own practical advantage in a society undergoing change, and these they seek to justify not only by the rationale of current conditions but also by an appeal to the past, quoting that part of history, with some re-interpretation possibly, which seems to them most advantageous. In this faith in historical precedence, the telling of Ngoni history therefore tends to vary from person to person and from place to place. Sometimes there is almost certainly some conscious distortion, suppression and invention of fact to suit particular purposes; frequently there is an over-emphasis here and a playing-down there in order to facilitate an interpretation and justification of a particular current or desired condition—to "prove" that something should or should not be changed, or that something else is or is not socially and morally right. The dispute in 1952–3

over the succession to the Ngoni Mshope chiefship and the secession of the Ndendeuli from the chiefdom provided a number of examples of such manipulation. Further, people like to throw the best light possible on their own status, on their own family or their sub-chiefdom by an appropriate appeal to history.

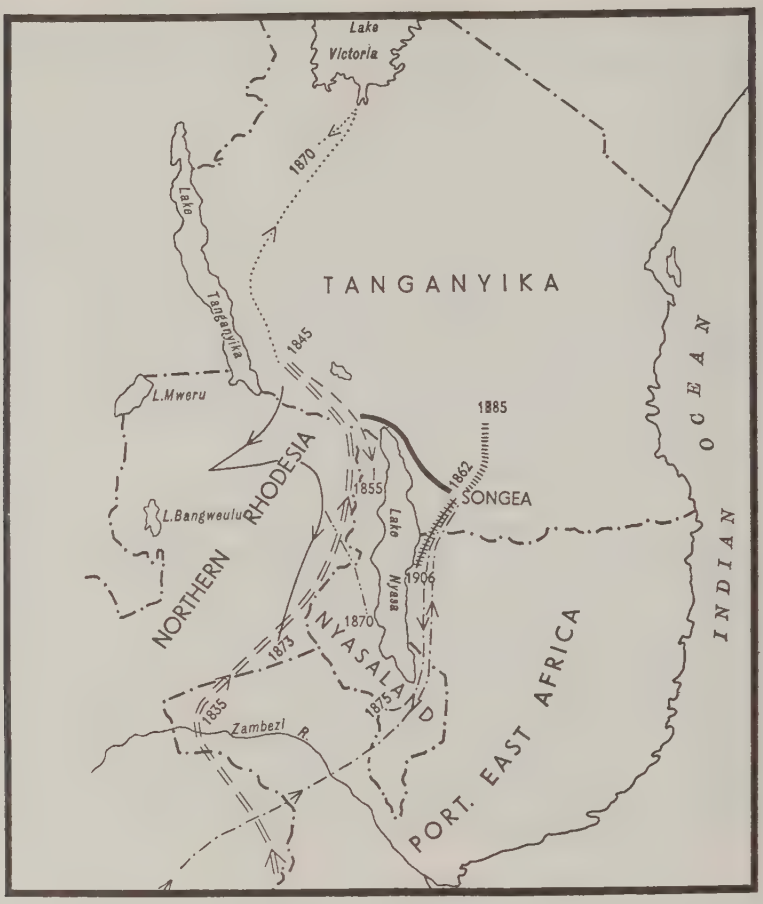
By reason of this use of history it is difficult to obtain a true account of the actual Ngoni past, quite apart from the obvious impediments of fading memory, lack of chronological reckoning and so on. In what follows I have attempted to steer through conflicting accounts and interpretations, and doubtless many Ngoni would not wholly agree with my narrative—indeed some can produce a profusion of facts to disprove parts of it. I can only say that I, unlike many of them, have no special or vested interest which favours any particular account, and again, unlike many of them, I have deliberately and consistently tried to ascertain the real facts from every possible source, acting as an external investigator. Fortunately there are a number of written records dating back to the time of the original exodus from Natal: also there are the histories of other tribes and accounts from other sections of the Ngoni now living in Northern Rhodesia and Nyasaland which together provide collateral evidence.

Finally, if history is a matter of social interpretation for the Ngoni so also it can be for the Europeans who work amongst these people, always providing that a correct version of the history is available. With some African peoples history is interesting, often fascinating, but little more. Not infrequently there is very little known history before immediately pre-European days. Concerning the Ngoni however, a knowledge of their history is, I believe, essential to an understanding of the people and their social system because of the special process of migration and conquest by which the Ngoni chiefdoms began and developed, and because, still today, they remain closely connected with that early evolution. With these chiefdoms we are not concerned with long-established groups in which authority, status, laws and customs had been laid down long before the Europeans arrived, the sources of which are lost in the prehistoric past. The two Songea Ngoni chiefdoms had only been established about thirty years and were still rapidly changing and developing when the Germans first came at the end of the last century.

THE ORIGINS OF THE NGONI

In the early part of the nineteenth century, in the area today known as Natal in South Africa, the great warrior chief, Chaka, began his career of conquest and the establishment of his powerful Zulu empire. Where there had formerly been a cluster of small, independent Nguni tribes, Chaka created a large, centralized military kingdom. In this process, however, not all of Chaka's neighbours were conquered or killed, for some fled beyond his reach. One such refugee group was part of the Ndwandwe tribe led by its senior *induna* (war-leader, sub-chief) Zongendaba (or Zwangendaba). This group fled in 1823 or 1824.

The force under Zongendaba, born of fierce war and conquest, not unnaturally took to raiding the lands through which it moved, for it was seriously short of two essentials—women and cattle. The Swazi peoples were the first to suffer, and others of Suto origin. Zongendaba also came into contact with other refugee marauders, such as the Matabele (afterwards so important in the affairs of Southern Rhodesia). On the whole Zongendaba's band did not fare too well



Routes (terminal dates in brackets)

- Zongendaba (1845)
- Zulu/Mbonani—Songea (1862)
- Mombera (Mbelwa)—N. Nyasaland (1855)
- Mtambarike—Kahama, Tanganyika (1870)
- Chiwere—Domira Bay, Nyasaland (1870)
- Mpezeni—Ft. Jameson, N. Rhodesia / Ft. Manning, Nyasaland (1873)
- Gomani Maseko—Ncheu & Dedza, Nyasaland / Villa Cortino, P.E.A. (1875)
- Mpepo Tavete, Ulanga, Tanganyika (1885)
- Miandika Gama, Mtengula, P.E.A. (1906)

N.B. Terminal dates of routes as given are only approximate.

in these encounters, and it continued northwards and crossed the Zambezi River on 19th November, 1835*. One estimate gives their numbers at this stage as about 1,000 people, and they formed a peripatetic war-band organized for predatory raiding; but their numbers were increasing rapidly by the absorption of numerous captives of both sexes. By this time they had come to be known as "Ngoni", a name probably derived from the term "Nguni", the general name of the peoples of the area of which Zululand is part.

The Ngoni continued northwards, lingering here and there for short periods and raiding the local peoples. After an abortive attempt to pass to the west of Lake Tanganyika, the band eventually reached Ufipa in modern south-western Tanganyika. Here the original Ndwandwe leader, Zongendaba, died in about 1845. He had welded his heterogeneous band into an efficient raiding group and had led it over 2,000 miles in about twenty years. His death brought acute conflict over the succession to leadership and caused an irrevocable break-up of the Ngoni. The resultant groups as they exist today are as follows:—

(a) Mpezeni Ngoni of Fort Jameson District, Northern Rhodesia and Fort Manning area of Nyasaland.

(b) Mbelwa (Mombera) Ngoni of northern Nyasaland.

(c) Chiwere Ngoni of Domira Bay area, Nyasaland.

(d) Mtambarike Ngoni of Kahama District, Tanganyika. This small group was composed of the followers of the brother of Zongendaba who had taken part in the succession dispute. They passed north from Ufipa, through Unyamwezi to reach Lake Victoria at Smith Sound. They moved south again and become allies of Mirambo for a time.

(e) Zulu and Mbonani Ngoni of Songea District, Tanganyika.

There are also:—

(f) Gomani Maseko Ngoni of Dedza and Ncheu Districts, Nyasaland (see below).

(g) Mpepo Ngoni of Kilosa chiefdom, Ulanga District, Tanganyika (see below).

(h) Miandika Ngoni of Mtengula, Portuguese East Africa. Miandika was a senior member of the Njelu (Zulu) chiefly family. He fled from the Songea region at the time of the Maji Maji Rebellion and established a small chiefdom in the hills, east of Lake Nyasa.

THE SONGEA NGONI

Amongst the supporters of Mbelwa (see (b) above) in his claim to succeed his father, Zongendaba, were two *ndunas*, Zulu and Mbonani. *Nduna* Zulu seems to have been the more important; he was a senior war-leader and has been described by Central African Ngoni as "military adviser" to Zongendaba himself. His name and clan are well remembered by the Nyasaland Ngoni to this day (unlike that of *nduna* Mbonani) and he has been described by a European historian of Ngoni in that region as "that wily old *induna* . . . (who) appears to have been a general of high qualities and a sound councillor"†. It is also probable

*This date is known because of an eclipse of the sun which happened on the day of the crossing.

†D. Gordon Lancaster: Tentative chronology of the Ngoni, *Journal of the Royal Anthropological Institute*, xvii, 1937, p. 70.

that Zulu's force was numerically larger than that of Mbonani. Zulu had married the elder sister of Mbonani as his chief wife, and this may in part account for claims of the Mbonani group today that their leader was the superior—i.e. he was in the superior in-law status.

After the social and geographical dispersal of the original Ngoni band in Ufipa, Zulu and Mbonani did not long maintain their allegiance to the youthful Mbelwa whose interest was in returning southwards. Together they seceded and began to move eastwards. When overtaken by the rest of Mbelwa's forces, the latter were decisively defeated in a battle near Old Langenburg (near where the Rungwe/Njombe border meets Lake Nyasa). Mbelwa retreated in confusion, whilst Zulu and Mbonani continued south-easterly into Upangwa, to halt at Mlangala. Here Zulu died in about 1858 and Mbonani became accepted as the senior leader, although Zulu's followers never gave him formal allegiance.

Here at Mlangala these Ngoni first came into contact with another Ngoni group, the Maseko Ngoni.

There is some confusion about the origin of these Maseko Ngoni but it would seem that they left the Zululand area with the forerunners of the Matabele from whom they separated after a brush with the Zongendaba Ngoni south of the Zambezi. They passed east of Lake Nyasa under their leader Mputa Maseko. Near the present Tanganyika/Portuguese boundary they overran the Nindi tribe and then easily and speedily enserfed the Ndendeuli centred on the northern Matogoro Hills*. Mputa established his chiefly village at Ngongoma on the upper Hanga River, and when the Zulu/Mbonani forces approached his principal followers must have been Ndendeuli.

Mbonani and the leading *ndunas* of Zulu did not attempt to attack Mputa, and in fact they more or less acknowledged his superiority in the face of his greater numbers. Mputa took no chances however and at a large feast put on at Ngongoma for the visitors he managed to kill several of their leaders†. Mbonani died soon afterwards, allegedly at Mputa's hands, and the newcomers were left temporarily leaderless.

Mputa Maseko continued his raiding activities, and on one occasion determined to attack the Manda tribe living on and near the lower Ruhuhu River. He arranged to lead a joint army of his own and the Zulu/Mbonani forces, but the latter, by design, arrived too late to take part. Mputa was badly defeated and, in flight, he took refuge in the Zulu/Mbonani camp. The people there took their opportunity and strangled him. Then they took the corpse back to Ngongoma and reported that Mputa had died of asphyxiation in thick dust whilst drunkenly incapable; his body was speedily disposed of in a funeral pyre. This story was apparently accepted—at least outwardly—and Mputa's son, Malunda, succeeded him. Now the Zulu/Mbonani group was encouraged to go further, and they attacked and routed the Maseko group, who in retreat passed southwards again, east of Lake Nyasa, and eventually settled in what is now southern Nyasaland where today they are known as the Gomani Ngoni.

*i.e. the Matogoro Hills to the west of the Luegu River, and not the smaller and lower range near the present Songea township.

†Mputa had a large pit dug and covered with mats. When the guests at the feast fell into it they were speared to death. Today this story is well remembered by the Songea Ngoni and it is related in great detail as typical of Mputa's perfidy and as justification of their later murder of Mputa and the expulsion of his forces.

The victorious Ngoni returned to their base at Mlangala in Upangwa, leaving the Songea region in anarchy. Those Ndendeuli and others who remained, learning from their erstwhile conquerors, began to raid their neighbours and to exercise tyranny over the heterogeneous crowd left behind as a result of Ngoni incursion. Soon, however, the Zulu/Mbonani forces returned in strength, and this time permanently; they settled near together at Seluka on the lower Hanga River (c. 1862) from where they reconquered the whole region. Some of the people fled before this re-conquest and arrived beyond the Kilombero Valley (Ulanga District) where they became known as the Mbunga. Today they form three chiefdoms, Ifakara, Kiberege and Mofu, and although they have a predominant Ndendeuli origin there are also people of trans-Nyasa origin and a number of Bena and Hehe. At the same time other, smaller groups fled eastwards into what are now Tunduru, Masasi and Newala Districts and into modern Portuguese territory. Today they are sometimes known as "Ngoni", though they have little historical claim to such a name as they were in origin only short-term Ngoni serfs of Ndendeuli-Ndonde-Nindi extraction.

Thus the Songea region was finally made the undisputed territory of the Zulu/Mbonani Ngoni. These two groups, although firm allies, had never united under a single leader, and now with comparative peace they drew apart geographically and politically. Each speedily selected its own *nkosi* (chief) from its own leading family, and each became established as an independent chiefdom.

CONSOLIDATION AND EXPANSION, 1862–95

When Zulu himself died in about 1858 he left several sons, none of whom were very mature and experienced in war-leadership. After Mputa Maseko's initial victory over the Zulu/Mbonani group the three senior sons left and returned to Mbelwa, now in northern Nyasaland, and another son was abducted by the retreating Maseko group. The only brother of Zulu had died in Mputa Maseko's pit. For a short time the Zulu group—now known as *Njelu*, after Zulu's father—was left without a chief and was led by the principal war-leader and diviner, Chikuse. This man had been born in Nyami country (modern Southern Rhodesia) and had joined the Ngoni as they moved northwards in the early 1830s. He was supported in Njelu by other Ngoni leaders of similar origin and also those of the Swazi origin of Zulu's family. With Mputa Maseko's death Chikuse was soon able to select as the new *nkosi* (chief), Hawayi, the eldest (but not the most senior) surviving son of Zulu. During the chiefship of Hawayi (c. 1862–74) the young Njelu military state was consolidated and its centre shifted southwards away from that of the Mbonani group. Raiding was begun in all directions, seeking booty and captives. By the lapse of time and perhaps by lack of particular character and dramatic successes in this consolidation period, Hawayi's memory has faded by today; but he and his *ndunas* had the important task of creating a new and settled state after forty years of wandering and the accumulation of a polyglot subject-people. In this work he and they succeeded.

When Hawayi died in about 1874 he was succeeded by his senior half-brother, Mhalule—the latter had been thought too young to succeed in 1862 and had therefore been passed over by Chikuse and the other *ndunas*. Mhalule became the most famous pre-European *nkosi* of Njelu, and during his time the chiefdom expanded rapidly as his war-bands raided throughout southern Tanganyika,

making their power and ferocity known up to the Indian Ocean. During this time the famed war-leaders such as Songea*, Chikuse, Chombera, Mpambolioto, Putire and others were all at the height of their power and success. Not only was much booty brought back from continual raids and expeditions far afield but, of greater importance, many captives of both sexes. These people went to swell the size of the young chiefdom and to increase its military manpower.

Towards the end of Mhalule's reign the Arab and Swahili slave traders established friendly and business relations with Mhalule (at a time when the less perspicacious *nkosi* of the Mbonani group was still hostile to coastal caravans). These traders established a base at Kikole, a few miles away from Mhalule's chiefly village. A steady supply of slaves and ivory was obtained from the Ngoni which further enriched the chiefdom and accelerated the tempo of raiding. In addition it is known that some slave caravans were taken to Kilwa by the Ngoni themselves.

Mhalule died at Mbinga (Matamondo) in 1889 and was succeeded by his junior half-brother, Mlamilo, who had his chiefly village near the present Mpitimbi. He was the last eligible son of Zulu, and was an ageing man of unexceptional qualities when first met by Europeans in 1894. He himself died in 1899 and was succeeded after some dispute by the senior grandson of Zulu—the eldest son of that eldest son of Zulu who fled to Nyasaland after Mputa Maseko's initial victory in 1860.

The Mbonani group—now known as *Mshope*, after Mbonani's father—had no difficulties in selecting a new chief after Mputa Maseko's death in 1862. The most senior son of Mbonani was already a mature man, seasoned in war-leadership. This son, Chipeta, had the same task as Hawayi of Njelu—the consolidation of a new, settled chiefdom. He did not only this, but also set the pattern of widespread raiding to the east and north. He shifted his chiefly village eastwards to Mtukano (north of the lower Hanga River). Unlike the *nkosi* Hawayi, Chipeta himself led the important raiding forces, and perhaps because of this his *ndunas* remained relatively less powerful than their Njelu contemporaries. The Mshope chiefdom began to emerge as a military state, autocratically and closely controlled by the *nkosi* himself. In contradistinction in Njelu the *nkosi* increasingly had to share his military and political authority with his senior *ndunas*, one of whom (Songea) had a very large measure of practical autonomy and a military following of about one-third of the total Njelu strength. *Nkosi* Chipeta did not allow this usurpation of his power in Mshope—nor did his son and successor, Chabruma. *Nkosi* Mhalule of Njelu had perforce to accept the conditions imposed upon him by his predecessor and the difficulties of succession following the early death of Zulu. Mhalule struggled against the decentralization of his chiefdom, especially through the process of allotting military and political power to his senior kinsmen whenever possible. In part his policy was beginning to succeed, but *nduna* Songea and others were by now too powerful and successful to be overawed, let alone to allow their authority to be diminished.

The somewhat more speedy, early development of the Mshope chiefdom was suddenly halted when the Ngoni came into collision with the rising power of the Hehe. In 1878 the Hehe invaded Mshope and looted the land after there had been some sporadic and provocative Ngoni raiding into their territory.

*The present township and District were named after this most famous and ferocious of Ngoni military leaders, whose base was a mile or two north of there.

Chipeta, too haughty to believe that the Hehe dare attack him, died in their assault on his chiefly village. The Hehe swept on westwards and reached beyond Peramiho. The Mshope Ngoni sought the aid of Njelu but Mhalule too was taken by surprise and it would seem that the Hehe only withdrew because of the distance from their homeland.

This Hehe triumph scattered the Mshope Ngoni who had suffered the brunt of the attack; even more serious was the death of their chief, Chipeta. The sixteen-year old chiefdom was further demoralized by the consequent dissension over the succession. There was an interregnum for about four years, under the regency of Chipeta's aged uncle, Mnukwa, before the eldest son, Chabruma, succeeded to the chiefship, and he only gained the position against a good deal of opposition centred around his half-brother, Palangu. The latter, though younger in years, claimed to be the more senior son by virtue of the seniority of his mother amongst Chipeta's wives. Palangu's discomfited failure was a continual source of trouble and intrigue for another seventy-five years afterwards*. Even with the succession assured, the new chief was not safe for his father's paternal cousin (the son of Mnukwa) disputed Chabruma's inheritance of the late chief's property, chiefly the herds of cattle. Under traditional Ngoni law, property and rank can be separate inheritable items, and this cousin, Mpepo, was the rightful heir; whereas Chabruma himself seized all the property. So great was the indignation of Mpepo and his group that open civil war broke out. As far as can be ascertained, Mpepo never made any claim to the chiefship itself, only to the property of Chipeta. Chabruma was victorious in the fighting and Mpepo fled northwards to the lower Bena country. From here he returned after a time with Bena allies, and was again driven out by Chabruma's forces. Thereafter, about 1885, Mpepo settled with his followers around Kilosa in the south of the present Ulanga District, where he established himself as an independent Ngoni chief (*nkosi*). These Mpepo Ngoni are commonly given the name of and are grouped with the Mbunga who live farther to the north. This is formally incorrect as Mpepo himself was a senior member of the traditional Mshope chiefly line with its Swazi origin, although of course most of Mpepo's followers were of similar heterogeneous origins to those of the Mbunga proper.

A further disturbing event occurred about 1881—the second Hehe war. Again the Hehe advanced into Ungoni after irritating Ngoni raids on their territory. This time, however, the Ngoni were ready and chief Mhalule of Njelu took no chances of a weak Mshope being defeated first, thus dividing and weakening Ngoni strength. A combined Ngoni force advanced to meet the Hehe—after some minor Hehe raids—and a large pitched battle took place. Probably the Ngoni had the better of it for the Hehe incursion was halted; but both sides suffered heavy losses. The traditional Ngoni account states that after the battle both sides agreed to an armistice between worthy enemies until such time as their sons grew of an age to resume the fight. Within about a decade, however, the Germans arrived, to prevent effectively any further collision between these two outstanding military peoples.

*Apart from quarrelling and even some minor fights, Palangu and then his sons disputed every chiefly succession afterwards, culminating in 1952–3 when Palangu's son was again unsuccessful against Chabruma's line. This son has now voluntarily cut himself off from the chiefly Ngoni family and clan and joined the seceding Ndendeuli.

These struggles seriously weakened the Mshope chiefdom, so that in numerical and geographical size and in military and political development it thereafter tended to lag behind Njelu. Nevertheless, like Njelu, the Mshope chiefdom continued to expand as a result of raiding and warfare. Njelu expanded farther southwards and westwards, whilst Mshope spread eastwards to the Luegu and upper Njuga rivers. On the other hand, whereas the more decentralized Njelu chiefdom expanded fairly evenly with the sub-chiefs and other true-Ngoni leaders living amongst their followers, the autocratic Mshope chiefdom kept all the true-Ngoni military and political leaders concentrated at or near the chiefly village. In this chiefdom therefore the Ngoni began to lose touch with the gradually dispersing, enserfed peoples who were spreading eastwards. Indeed so separated had these eastern areas become that by 1900 the German Administration refused to acknowledge them as coming under the control of the Mshope chief, and instead an independent *akida* was appointed to reside at Likuyu. Such a policy was not possible in the Njelu chiefdom.

The two Ngoni chiefdoms were at the peak of their power and achievement in about 1890 when they had become allied to and encouraged by Coastal slave traders. In the appendix to this history is given a list of twenty Tanganyika tribes which were raided by the Ngoni and which supplied war captives to swell the chiefdoms or to be sold as slaves. Some areas such as the Ngindo-Ndonde country to the east of Ungoni, and the Lake Nyasa littoral to the west, were raided so frequently that they were largely depopulated as the rest of the people fled out of reach. A no-man's land came to ring the chiefdoms—empty country in which no man dared live but which the Ngoni did not wish to occupy.

Although Ngoni raiding was bloodthirsty in the extreme, a war-captive who was not sold as a slave was taken into the homestead of his captor (or his captor's military superior) and was not badly treated. His serf status was clear—he had to give labour, produce and military service to his master—but he became an "Ngoni" and could marry and establish his own homestead in due course. If he was able and successful in war he could even rise to be a subordinate war-leader and counsellor. A female captive was married and the bridewealth she fetched became the property of her captor who himself could not marry her.

Leadership and authority in the chiefdoms, and high status and privilege was however the prerogative of men whose families were of trans-Nyasa origin. These were the "true-Ngoni", with the highest status being accorded to men of Swazi families which had joined Zongendaba in the very earliest days of Ngoni history—of these Swazi families those of the two chiefly lines were pre-eminent. In both chiefdoms the principal war-leaders were not necessarily of Swazi origin, but Tonga or Kalanga, but their families too had joined Zongendaba in the early days. Not all "true-Ngoni" did, of course, achieve actual leadership and wealth for these emerged in practice out of material success in warfare, nevertheless for the "true-Ngoni" such fortune was most readily available. No senior war-leader in Njelu rose from the enserfed ranks of the "new-Ngoni", and only two such men arose in Mshope of whom neither reached the top rank. It has already been shown that in Njelu, despite the great power of several non-Swazi families, there was a definite policy by the chiefs Mhalule and Mlamilo to enhance the position of members of the chiefly family (i.e. descendants of Zulu). This was an attempt, only partially successful, to reduce the authority of these other sub-chiefs and to prevent excessive decentralization in the fear of the break-up of the

chiefdom. In Mshope, conversely, the autocratic chiefs, Chipeta and Chabruma, were at pains to minimize the power of their brothers and cousins of the chiefly (i. e. Mbonani) family by allowing what subordinate power there was to go to other "true-Ngoni" families.

The large bulk of the population was of Tanganyika and serf origin*. It may be noted that these people tended to become more "Ngoni" than the people of trans-Nyasa origin, at least in so far as enthusiasm and ferocity in war was concerned. They commonly embraced whole-heartedly the Ngoni attitudes to war and to other peoples, and participated in, even helping to lead, raids on the countries of their origin and of their former friends and neighbours. They formed the vast majority of the fierce, bedecked warriors who were so feared from the Livingstone Mountains to the Indian Ocean.

THE MAJI MAJI REBELLION

Somewhat surprisingly, in the last years of the nineteenth century the Ngoni accepted German superiority and authority without a fight, so impressed were they by accounts of European military ability on the coast. It seems also that the Ngoni had expected the Germans to come as friends, as had the Arabs and Swahili; it was hoped that, with European assistance, Ngoni successes and fame would increase enormously. Unfortunately for the Ngoni the Germans came as a conquering people and not as allies. They insisted on interfering in Ngoni affairs and in the subordination of the chief and his principal war-leaders in each chiefdom. Smarting under the new regime, the Ngoni welcomed the opportunities of the Maji Maji movement for rebellion.

News of the Maji Maji medicine and its possibilities reached Mshope in about July 1905, when Ngindo began travelling westward amongst their related neighbours in the eastern part of that chiefdom. At about the same time the "water" was officially brought to chief Chabruma by Jumbe Kinjala†. Chabruma immediately ordered all his subjects to take the "water" and as far as can be ascertained today everyone did so—I have not met an old man of that chiefdom who now denies doing so. Meanwhile the news and medicine was sent on to chief Mputa of Njelu, but not all the men of this chiefdom took the "water"—some actually refused, including at least two war-leaders, and others had not time before the Revolt broke out.

*In 1953 in Njelu chiefdom only 2·6 per cent of the male population was of Swazi origin in the patrilineal line, and 15 per cent of trans-Nyasa origin. Of these probably none can claim an heredity unadulterated by "new-Ngoni" inter-marriage.

Sample surveys in the Mshope chiefdom of 1953 showed the following estimates of the origins of the "new-Ngoni":—

Ndendeuli	20–30 per cent
Ngindo	15–25 per cent
Pangwa	15–20 per cent
Manda	5–10 per cent
Bena Ndonde	5–10 per cent
Other Bena	c.5 per cent
Matengo	c.5 per cent
Yao	c.5 per cent
Other tribes	5–10 per cent

In Njelu the largest single element is Pangwa, and there are areas in the west of this chiefdom with populations of 70–80 per cent Pangwa origin.

†cf. R. M. Bell: The Maji Maji Rebellion in the Liwale District, *Tanganyika Notes and Records*, xxviii, January 1950. pp. 49–50.

The main events in the fighting in Songea District were: first, the heavy initial attack led by Chabruma himself on the German District Officer's force at Gumbiro near to Magingo Hill, which was repelled with heavy losses to the Ngoni: secondly, the murder of the Benedictine missionary, Father Frances, at Maposeni on 9th September, 1905, followed soon after by the arrest of chief Mputa and many of his principal sub-chiefs and other people: thirdly, a battle on the upper Lumecha River in which a combined Ngoni force was badly defeated and the remaining important leaders were captured or driven away. This latter defeat was the culminating blow against the Ngoni, although there were also a number of other minor affrays.

A large relieving force reached Songea from Kilwa at the end of November 1905—including twenty-five Europeans*, and afterwards a smaller force arrived from Iringa. Immediately heavy repressive and punitive measures were put into action—extensive arrests and executions, the burning of fields and crops, heavy tribute and fines and general harrying. In addition—and what was probably worse for the Ngoni—the German *askaris* and porters were allowed more or less a free hand to do as they wished in the country. The Ngoni fled in all directions, first in fear of repression, and then in danger of starvation—to Upangwa in the north, to the lake shore and the Matengo Hills in the west, to Portuguese territory in the south and to Tunduru District in the east. Chief Chabruma fled to Portuguese territory where he died; chief Mputa was hanged with all his principal sub-chiefs and others. It seems clear that the Germans, having earlier subdued the Hehe, regarded the Ngoni as the greatest danger to the peace and security of the southern part of their Colony. The other tribes of southern Tanganyika who were involved in the Rebellion offered a much smaller, permanent threat for they had no military tradition and leadership. The Ngoni, however, had never been defeated and had a tremendous war-like reputation. In 1905 they could have put perhaps 8–10,000 men into the field with little delay and with high morale, although in the event the revolt was ill-planned and probably premature and no such large force appeared on any one occasion. Because of all this, repressive measures after the Rebellion were more prolonged and severe in Ungoni than anywhere else. In the Liwale area itself (the origin of the Rebellion) once the main militant force had been defeated and its immediate leaders captured, little further action was taken. In the Songea District punishment continued for well over a year, into 1907. With first the Hehe and now the Ngoni defeated, the Germans must have felt that peace was assured.

The dismal defeat of the Ngoni and the disastrous aftermath of the Rebellion were critically decisive in Ngoni affairs, and in some ways the effects of the demoralization has continued into modern times. The Ngoni were conclusively and effectively defeated and their leaders removed by execution or flight. By 1907 the traditional regime, military prestige and old ways of life had been swept away for all time.

THE INDIGENOUS PEOPLE OF THE SONGEA REGION

It may be of interest to add a note here concerning the indigenous peoples who came under Ngoni domination in the second half of the nineteenth century. It is true that the Ngoni were almost everywhere wholly victorious over these

*cf. Bell, op. cit, p. 51.

peoples and those who lived in southern Tanganyika—only the Hehe were their equals. On the other hand, apart from the Hehe, the Ngoni found little to test their military skill and power.

In 1616 a European explorer walked from the Zambezi River east of Lake Nyasa and thence across to Kilwa on the Indian Ocean, and apparently he had no difficulties with the local peoples during this extraordinary journey. In his journal he makes no mention of war-like or marauding tribes nor of warfare amongst the people whom he met*.† This picture accords with my own impressions of pre-Ngoni conditions in what is now southern Tanganyika. Nindi, Manda and Ndendeuli informants all agree that in those days their forefathers did not know how to fight for they never in fact had occasion to do so. Anything larger than a small inter-community or inter-clan affray was unknown. People do not attempt to disguise the fact that their tribes were speedily and exceedingly easily conquered and that their grandfathers meekly followed and obeyed the insurgent Ngoni. I have similar impressions of the Pangwa, Ngindo and Pogoro people.

This conception perhaps clashes with the popular notion of a primitive state of warfare, murder and savagery in darkest Africa, but I can only state that as far as information can be obtained today one can only perceive a picture of fairly innocuous peace before the introduction of predatory raiding and fierce warfare by the Ngoni and the coastal slave traders. If there was savagery and bloodshed before that era it was limited to local, small and individual conflicts.

In addition to this it must be pointed out that tribal loyalties and co-operation were amorphous and rudimentary. In fact there were no compact tribes, or even perhaps tribal areas; certainly there were no chiefs or centralized political organizations. The traditional social system was probably based on fairly small kin groups who lived, sparsely scattered over a wide area, with much uninhabited country. There seems to have been a good deal of movement under shifting cultivation, and loyalties became increasingly diffuse. Terms such as Ndendeuli or Manda, for example, must have stood for vague geographical areas whose inhabitants recognized amongst themselves relatively more cultural homogeneity than with outsiders. There could in no sense have been any specific Ndendeuli or Manda tribal resistance to the invading Ngoni. Only small groups, even individuals, resisted the Ngoni war bands as they appeared, and all native accounts show how these indigenous peoples were only too ready to submit to them. Livingstone remarks how eventually the awe and fear of the Ngoni was so great and resistance so feeble that the Ngoni could send warning of their approach and demand both booty and captives without any fighting. This may not have been general but that it happened at all is significant. Some people like the Matengo hid in the hill forests and in caves—others, like the Hamba, hid in the depths of the thicket. One cannot escape the impression that the Ngoni had an easy task and that their military ability was seldom tested.

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*This early traveller was a Portuguese, Gaspar Bocarro, whose journal is quoted by R. N. Hall in his *Prehistoric Rhodesia*. Cf. also T. Cullen Young, *Notes on the History of the Tumbuka-Kamanga Peoples*, London, 1932, pp. 17–21.

†See also "A Journey by Land from Tete to Kilwa in 1616" by Sir John Gray in *Tanganyika Notes and Records*, Number 25.—Ed.

APPENDIX

A.—A Short List of Dates in Ngoni History

c. 1823 Ndwandwe group under Zongendaba fled from the Zulu chief, Chaka
1835 Ngoni crossed the Zambezi river
c. 1845 Death of Zongendaba in Ufipa
c. 1850 Zulu/Mbonani forces defeated Mbelwa near Old Langenburg
c. 1856 Zulu and Mbonani reached Mlangala in Upangwa
c. 1858 Death of Zulu at Mlangala
c. 1862 Death of Mputa Maseko
Hawayi became chief of Njelu
Chipeta became chief of Mshope
c. 1874 Mhalule became chief of Njelu
c. 1878 First Hehe War: Ngoni defeat
Death of Chipeta
c. 1878—82 Regency in Mshope
c. 1881 Second Hehe War: Ngoni victory
Chabruma became chief of Mshope
Mpepo civil war
c. 1882 Archdeacon Johnson visited Njelu from Lake Nyasa
c. 1886 Arab slave-trading camp established in Njelu
1889 Mlamilo became chief of Njelu
1894 The first German reached the Songea region
1897 German military occupation of Ungoni
1898 The first Benedictine missionary arrived
1899 Mputa became chief of Njelu
1905–7 Maji Maji Rebellion and repressions
1907 Usangila became chief of Njelu—Mwanalifa became chief of Mshope

B.—The Origins of the Songea Ngoni

1. *The "true-Ngoni"*

Swazi- and Suto-speaking peoples (S. Africa)
Tonga (Natal and Portuguese East Africa)
Kalanga (Southern Rhodesia)
Senga, Kamanga, Sukuma and Tumbuka (Nyasaland)
Nyiha and Safwa (Tanganyika)

2. *The "new-Ngoni"*

(a) tribes from which large numbers originated:

Bena
Manda
Matengo
Ndendeuli
Ndonde (Bena)
Ngindo group
Nindi
Nyasa group
Pangwa
Yao

(b) tribes from which relatively few originated:

Hehe
Kinga
Kisi
Makonde
Makua
Mawindi
Mwera (coastal)
Mwera group (Nyasa)
Njalila
Nyakyusa
Pogoro

The "true-Ngoni" are those whose forefathers belonged to or joined (by capture or otherwise) the Ngoni band before the assumption of independence of Zulu and Mbonani in about 1850, to the north of Lake Nyasa. Under the pre-European system the "new-Ngoni" were known as *sutu* or "serfs".

Every Ngoni today, of whatever origin, still remembers his ancestor (usually grandfather or father) who first joined the Ngoni chiefdom and the tribe from with he came.

C.—The Indigenous Peoples of the Songea Region

No estimates can be made of the numerical sizes of these groups but none could have been very large, a few thousands perhaps, and some must have been quite small.

Ndendeuli—centred on and around the northern Matogoro Hills east of the upper Luegu River, and extending to the lower Hanga-Lutukira and Lumecha valleys. Almost certainly they were a branch of the Ndonde group which at that time inhabited country on either side of the Mbarangandu River. The name "Ndendeuli" originated from an Ngoni nickname from a phrase so commonly used by these people at the time of the Ngoni incursion, "what are we to do?" Before the Ngoni came, the Ndendeuli had been augmented by a number of immigrants from Upangwa and elsewhere from the west, for there appears to have been a famine in that region in the middle of the century which drove people to seek new country.

Manda—inhabited the lower Ruhuhu valley. Closely related to Pangwa.

Njalila—inhabited the Njalila valley south of the lower Lutukira River. May have been a branch of the Manda.

Mawindi—inhabited the lower Lutukira area.

Nindi—inhabited the lower and southern parts of the modern Matengo Hills and the adjacent plains to the east, across the present Tanganyika/Portuguese border.

Matengo—inhabited the higher and northern parts of the modern Matengo Hills. Originally composed of Nindi who had moved northwards into the empty hill forest. The name "Matengo" means "forest". The original group was augmented by immigrants from Upangwa, Umanda and a few from the western shore of Lake Nyasa.

Nyasa (*lake shore*) *group*—in pre-Ngoni times (and until after about 1900) the eastern lake shore was very sparsely populated, except perhaps near the Ruhuhu estuary where lived the Manda. There were elsewhere only scattered families who had moved down from Nindi, Matengo and Pangwa areas and from the western shore of the lake.

Bena Ndonde—this section of the Bena inhabited the southernmost tongue of the Southern Highlands which extends into the modern Songea District east of the upper Ruhuhu River, around and immediately south of the Lukumburu River.

N.B.—Of the Ndendeuli people who have recently achieved their independence of the Mshope Ngoni, rather less than half can claim descent in the male line from original Ndendeuli stock. The bulk of the people are the descendants of Ngoni war-captives of many origins.

It is impossible today to obtain satisfactory information on the social organization of these early groups. They were all patrilineal in descent and inheritance. Throughout the region from the Liwale area into Upangwa there are a number of common clan names and clan taboos: other clan names are however restricted to specific groups and these common names may be due to migration rather than to ethnological inter-relations. Bridewealth was unknown before the Ngoni arrived, and marriage was legalized at a ceremonial meal of a fowl provided by the bridegroom. Amongst the Ndendeuli, and perhaps others, the suitor had to live with the girl's father and work for him for several years before the marriage could be concluded. In Undendeuli this still occurs to some extent, as it does also amongst the Liwale Ngindo.

Ndendeuli, Nindi and Ngindo dialects are mutually intelligible. Ndendeuli informants claim that their language has affinities with that of the Pangwa, and this assertion is borne out by the fact that modern Ngoni, as spoken today in Njelu chiefdom, is both readily intelligible to the Ndendeuli and is also not beyond the comprehension of a Pangwa speaker.

THE LIFE OF JUSTIN

An African Autobiography Translated and Annotated by H. A. Fosbrooke

TRANSLATOR'S NOTE

This is a translation of the Swahili book published by Eagle Press, Nairobi, under the title of *Maisha ya Sameni ole Kivasis, Yaani Justin Lemenye*, and here reproduced with the consent of the publishers. The introduction is as originally published, but the notes have been recast in a form thought more suitable to the present journal.

The alert mind of the elderly author can be judged by the fact that when aged over seventy he completed this manuscript with great rapidity and, without any references, he only slipped up once on a name or a date. He died at his home near Same on 23rd June, 1954. He not only lived a very full life, but has left a record of his early adventures as an inspiration to the younger generations of Africa. May the youth of today meet and adapt itself to the constantly changing circumstances which modern contacts involve, with the same balance and good sense that Justin showed throughout his life when catapulted with amazing rapidity from plenty to famine, from plain to mountain, from kraal to school, from up-country to coast, from teaching to clerking, and finally after a long and useful period of Government service, back to a well-earned retirement of peaceful pastoralism.

FOREWORD

By Sir Claud Hollis, G.C.M.G.

I should like in the first place to endorse the tribute which Mr. Fosbrooke has paid to my old friend Justin, who materially helped me to compile my book *The Masai, their language and Folklore* (1905), and who, I regret to learn, died on the 23rd June, 1954. And secondly I wish to pay a tribute to the missionaries working in East Africa, particularly to those of the Church Missionary Society, who were responsible for Justin's education. For this purpose I quote from p. 239 of Sir Charles Eliot's book *The East Africa Protectorate* (1905). "We must not forget," he wrote, "the immense debt which Africa owes to missionary enterprise . . . In all parts of the world where I have come in contact with missions, I have found that their labours, if judged by an entirely unsectarian standard merely as contributions to the welfare of mankind, are deserving of the highest praise. . . . In the East Africa Protectorate I can give the missionaries nothing but praise and thanks." I may add that I was acquainted with all the missionaries mentioned by Justin, and with Bishop Tucker, who confirmed him, and I formed a high opinion of them.

Having thus prefaced my remarks, I shall now give a brief account of my early life in East Africa, for it bears to some extent on what Justin has written. I started in March, 1893, as a volunteer (*Lehrling*) in a German firm, Karl Perrott & Co., Deutsch-Ostafrikanische-Seehandlung (later called Die Westdeutsche-Handels-und-Plantagen-Gesellschaft), of Wiesbaden and Tanga, German East Africa. Having spent seven months in the office at Wiesbaden, I was given an appointment as a clerk in the firm's business at Tanga, where they had an hotel, a store and a large coconut plantation. My salary was 40 marks (£2) a month with free board and lodging at the hotel. The firm's main business was importing cotton goods and plantation implements, and exporting ivory, copal and copra.

I made many friends at Tanga and had plenty of spare time, which I devoted to learning Swahili, going for short expeditions (for instance, to the Station of the Universities' Mission to Central Africa at Magila) and collecting coleoptera. One of my friends was an elderly lady, the sister of Hauptmann Freiherr von Buelow, the former Commandant at Marangu, who, as Justin and Charles Dundas record, was killed at Kahe early in 1893.

In August, 1894, I was entrusted with the task of opening a branch store at Moshi, on the slopes of Mount Kilimanjaro. I went by train, accompanied by a caravan of over 100 porters, and with numerous bales of cloth, beads, etc., from Tanga to Muheza, which at that time was the terminus of the Tanga–Moshi railway, and thence on foot to Moshi. During this journey I made my first acquaintance with the then dreaded Masai, but they did not molest me on my paying them *hongo* (tribute) in the form of three bales of Mericani cloth.

At Moshi I was hospitably received by Leutnant Eberhardt, who, in the absence of Hauptmann Johannes on leave, was in command of the Kaiserlichen Schutztruppen stationed there, and I was made an honorary member of the officers' mess. With the help of Zahlmeister (Paymaster) Zimmermann, I erected a native hut and shop. I then visited the various chiefs on the slopes of the mountain as well as the mission stations, and I spent a few days at Taveta as the guest of the Rev. A. R. Steggall. Justin was not there at

this time. I was invited by Leutnant Eberhardt to accompany him on two small expeditions to tribes in the neighbourhood, but, to my disappointment, not on the occasion when punitive measures were undertaken against the people of Arusha to avenge the murder of two German missionaries, Drs. Lent and Kreschmer. I also accompanied Stabsarzt Dr. Scholz in an attempt to ascend Kibo, the dome of Kilimanjaro. We were not successful, a height of only 14,000 feet being attained, but the experience was an interesting one.

The experiment of opening a branch store at Moshi was not a financial success, due principally to the fact that the goods supplied to me from Tanga were those the firm wanted to get rid of, and not those required by the natives. As a result, I was recalled to Tanga in April, 1895. Just before I left, a post office was opened at Moshi, and I have a post-card sent to me by Hauptmann Johannes, who had returned from leave, bearing the date, 16.4.95 and the words: "Anbei die erste Postkarte mit Moschi-Stempel".

I was present at Tanga early in 1896 when the Governor of German East Africa, Major von Wissmann, accompanied by a large military force, passed through that town on his way to the Anglo-German frontier to receive the surrender of Mbaruk bin Rashid, the Mazrui Chief, who had rebelled against the British Government, and who, after being defeated at Mweli, had crossed into German territory. This rebellion is referred to by Justin (Chapter XIV).

The mortality among the Germans at Tanga was rather high about this time, many dying from malaria, black-water fever, dysentery and venereal diseases. All Europeans were buried in a cemetery on Tanga Island, a small island in the Bay.

I resigned my appointment with the Westdeutsche-Handels-und-Plantagen-Gesellschaft on the 1st August, 1896, and went home.

I was appointed in March, 1897, an Assistant Collector (afterwards styled Assistant District Officer or Assistant District Commissioner) in the East Africa Protectorate on a salary of £250 a year.

I arrived at Mombasa in the following month and worked for a few weeks in the office of the Sub-Commissioner of what was later called the Seyyidieh Province, Mr. C. H. Craufurd, but was unfortunately taken ill with dysentery in May and was invalided home in July. I was back at work in Mombasa in November, this time helping the Directors of Transport of the East Africa and Uganda Protectorates, Mr. D. J. Wilson and Dr. A. D. Mackinnon, who were mainly occupied with dispatching troops and supplies to Uganda, where a mutiny of the Sudanese troops had broken out.

In December, 1897, I was sent to Rabai, an important centre of the Church Missionary Society in the charge of the Rev. A. Grafftey-Smith and the Rev. John Jones (the latter is mentioned by Justin), to open a station there and to recruit porters; between 4,000 and 5,000 were recruited and helped to convey military stores to Uganda.

In November, 1898, I was transferred as Acting District Officer to the Vanga District, with headquarters at Shimoni. The most important event that occurred while I was stationed at Shimoni was the wrecking in June, 1899, off Wasin Island, of the last slave ship (a dhow) recorded in East African waters. An account of this is given on p. 290 of Professor R. Coupland's book *East Africa and its Invaders* (1938).

The following year I was moved to the Voi District, with headquarters at Ndii; at this time the construction of the Uganda Railway was being held up by man-eating lions, and my predecessor, Mr. R. Whitehead, was mauled by one of them and invalided home. Towards the end of the year, I was instructed to go to Taveta, the sub-district of the Voi District, which had been closed for a few months owing to shortage of staff.

Justin was not in Taveta in 1900, but his friend Johanna was and helped me with studies of the local people. According to Justin's account, he went back to Taveta early in 1897 and worked there as a teacher for four years, when he left the Mission as his pay was insufficient, and he "became dependent on his cultivation". It is probable that he only remained two or two-and-a-half, not four years. When he left the Mission he gave Mr. Steggall a translation into Masai of the first few chapters of St. Mark's Gospel, which Justin and I later completed.

It was while I was at Taveta early in 1900 that the Chagga tribes on Kilimanjaro rebelled against the German Government. As a result, some of the Chiefs, including Meli, the Moshi Chief (who is mentioned by Justin), were hanged.

In April, 1900, I was appointed Acting British Vice-Consul in German East Africa, with headquarters at Dar es Salaam, at the same time becoming a District Officer of the East Africa Protectorate, with a salary of £400 p.a. The Boer War was in progress in 1900, and one of my duties was to see that a large number of cases containing arms and ammunition for the Boers, which had been landed on a small island near Dar es Salaam, were not sent to South Africa. I witnessed from the deck of S.M.S. *Seeadler*, with whose officers I was on friendly terms, the landing at Dar es Salaam of President Kruger, who was on his way to Europe in a Dutch ship-of-war.

On the 20th January, 1901, at the invitation of General von Liebert, the Governor of German East Africa, I accompanied him to Zanzibar to call on Sir Charles Eliot. We lunched at the British Agency, which in those days was the house called Mambo Msiige, and after lunch, when the Governor went to the German Consulate, Sir Charles Eliot informed me that he wished me to be his Private Secretary, and that he intended to recommend me for the appointment of Secretary to the Administration of the East Africa Protectorate, which appointment, with the approval of the Foreign Office, he proposed to make.

I returned to Dar es Salaam to pack my belongings and pay farewell visits, and left again for Zanzibar to take up my new appointment on the day Queen Victoria was buried, when all flags were flown at half-mast. Except when Sir Charles Eliot or I were on leave, I was privileged to be his Private Secretary during the whole of the 3½ years he was in East Africa. This was in addition to my work as Secretary to the Administration of the East Africa Protectorate. It was for me an education in itself being thus in daily contact with, and enjoying the conversation of, such an able and brilliant man, who, as his biographer, Sir Harold Parlett, wrote: "possessed a brain so acute and a memory so retentive (it has not inaptly been compared with a fly-paper) that no subject, however abstruse, held terrors for him; and what others accomplished only with heavy travail he took unconcernedly in his stride".

In February, 1901, I accompanied Sir Charles Eliot on a short visit to Mombasa and Nairobi, and we then went in H.M.S. *Scout* to Kismayu, which in those days was included in the East Africa Protectorate. Military operations were at that time being undertaken against the Ogaden Somalis, who a few months previously had murdered Mr. Jenner, the Sub-Commissioner of the Jubaland Province. Having completed over $3\frac{1}{2}$ years' continuous service in East Africa, I was granted leave of absence in June, 1901, and went home.

To the best of my recollection, I first met Justin about Christmas, 1902, when he was one of a party that sang carols at Government House, Mombasa. But, according to his account, we had met previously, presumably when I was doing famine relief work at Mombasa towards the end of 1899. I am afraid he has got some of his dates and statements in Chapters XVI to XVIII a bit mixed. He evidently returned to Taveta to work for the Mission early in 1903, for it was with Mr. Steggall's consent that I invited him to join me at Nairobi. Justin worked with me, both at Nairobi and Mombasa, and again in Masailand, e.g. at Lenana's kraal (which he records), for considerably longer than he states (about three months), for it was not until 1904 that he was appointed interpreter to the District Officer at Rumuruti, Mr. Collyer. Sir Charles Eliot resigned his appointment in June of that year, and I was granted leave to go home with him. I was therefore not in East Africa when Sir Donald Stewart, Sir Charles Eliot's successor, obtained the Secretary of State's approval to move the Masai from the Rift Valley to Laikipia, which move was undertaken in October, 1904. It is referred to by Justin, and it was mainly for this purpose that his services were required at Rumuruti, though he went there some months earlier. Any further details regarding this move and the removal of the Masai in 1910 from Laikipia to south of the Uganda Railway can be obtained from a lengthy memorandum which I wrote in July, 1910, and which was published in a White Paper entitled *Correspondence relating to the Masai* in July, 1911.

Justin correctly states that he was in Government employ for three years. It was in 1907 that he returned home. "At that time", he writes, "Mombo could not be seen for the number of people who were engaged on railway construction." I last met Justin, as he states, after the 1914–18 war. It was in 1922, when I was acting for Sir Horace Byatt, Governor of Tanganyika, who was on leave. I paid a short visit to Lushoto, which had been the headquarters of the Civil Administration of Occupied German East Africa from December, 1916, to February, 1919, and Justin came to see me there and talk over old times.

INTRODUCTION

This is the story of a man who went through many tribulations in his youth but he put his trust in God and in the end found peace. Many people are still alive who could write the story of what they saw and what they did in the 1914–18 War and subsequent years, but those who can give us the story of events which occurred before the beginning of European rule in this country are few and far between. So the day when I first met the writer of this book was a stroke of good luck both for me and for you as Justin Lemenye, or, as he was first called, Sameni Kivasis, was one of the first Africans of Tanganyika who learnt to read and write. It is now more than sixty years since he first entered school; the one which he attended was the first English school for Africans, opened in Chagga country before the Germans had fully taken over the administration of that area. It is doubtful whether the pupils of Old Moshi School know that there has been a school there for so long. Before he entered school, Justin saw with his own eyes many things of which we read in history books, so this work should appeal to the people of all tribes in this part of the world. The Sambaa can read how Justin was threatened by their Chief Semboja, the Masai and Kwavi can hear how their tribes were scattered by famine and sickness, the Chagga can learn matters concerning the great Chief Rindi, how he lived and how he fought the Europeans.

It is amazing to me how a man can remember so much detail after so many years. As you read, you would think Justin was relating something that just happened yesterday. The author received no assistance in the writing of this book nor was he reminded of any of the events described therein. When I met him in Same in September, 1951, I suggested that he should write his life and to my surprise he had completed the work before the year was out. If I am fortunate enough to live seventy years or more and should I retain the faculties and strength to write such a book as this, I will be a truly thankful man.

In order to make things clear for the reader, I have prepared a chronology and where it was possible to give further information, this has been done in the form of footnotes. When I was editing the manuscript in this way, I was amazed to notice how the events which Justin described in his book were substantiated in standard historical works, even the dates being correct. I spotted one mistake only, namely, that the Boer War started in 1899 and not 1895 as shown.

This story takes Justin's life to 1911 only. Doubtless readers will ask "what has he been doing since then?" So I will give you a few details of his subsequent life. When he returned home to live with his sister and his relations, hearing that he was a man who had worked well with the Europeans, the Laibon of the Kwavi, Maitei, got Justin to help him to rule the Kwavi and to act for him as an interpreter whenever he went to see the Germans at Lushoto Boma. Justin continued in this work during the 1914–1918 War; then when the English came in, he continued till Laibon Maitei resigned his office. Justin was then chosen to be the Jumbe of the Kwavi and he held this office for thirty-five years until he resigned in 1947.

Although he had reached the age of retirement, he did not hesitate to write his life when I asked him to, so we thank him most heartily for this work which he accomplished in his old age.

H. A. Fosbrooke

CHAPTER I

BIRTH OF SAMENI

I, Sameni, son of Kivasis, was born at Madala near Lushoto in Sambaa country. When I became old enough to understand events, there was famine in that country together with smallpox but I did not realize that this also affected all the surrounding countries, I thought it was only where I was, for a child only knows what is happening in the place where it is. I heard that this famine was preceded by the appearance of a comet (1) which came from the east: it was said that the famine was brought by the comet. This famine was called by the Sambaa *Sala ya mnyime afe*. I think the reason for this was that those who had food were so pestered by those who had none that they thought it better that they should die. For short, the famine was called *mnyime* or in Masai and Kwavi *Olari le ngolong* meaning the year of scorching sun.

I remember one day I went with some companions, who were rather bigger than I, to steal maize from the Sambaa (2) who were cultivating in the swamp area at Mombo: we were chased, I was caught and only released when my father paid three goats. I saw Chief Semboja, the ruler of Sambaa (3); he was short and of light countenance like an Arab. The Kwavi called him *Naibor* which means "the white one". His dwelling was at Mazinde or Msalaka. His son, Kimweri, lived in a village in the hills called Vuga. The Kwavi called him *Longarara* meaning "he who wears ostrich feathers". It is not that I just heard of these people or was told of them. No, I actually saw Semboja as he was friendly with my father and they were of the same age set (4).

During this famine, the Masai migrated to Mombo in order that they might save their cattle since the grass was finished beyond the Ruvu. At that time there was no peace between the Kwavi and the Masai, but Chief Semboja arbitrated between them and both tribes feared him because his people were armed with guns.

This enforced peace did not last for long. Some little time after the peace was broken, the Kwavi started to come down from the hills to purchase meat from the Masai whose cattle were dying from the disease called East Coast Fever. Thus it was that the Kwavi came to realize that the Masai were people like themselves and that they spoke the same language with certain exceptions. They laughed when they discovered these differences in language.

When the Masai saw that their cattle would be infected by this sickness, they returned to the other side of the Ruvu without delay.

CHAPTER II

CAPTIVITY AND ESCAPE

When the Kwavi saw that the Masai had returned to their country, that is on the other side of the Ruvu, the Kwavi thought that there would be no more fighting with the Masai, but the Masai had other views. The Kwavi started to descend from the hills and live on the plains of Mazinde and Mombo. My father lived near his friend Chief Semboja at Msalaka near Mazinde. The Masai having returned to their country heard that the Kwavi had descended from the hills with many cattle. Those hills had in the past been their defence, for the Masai were afraid to carry their war into the hills, because this would have angered Chief Semboja. By bad luck one day, I and my companions were

going to the millet *shamba* to collect millet stalks for chewing like sugar cane. Suddenly we heard the sound of bell anklets: it was the Masai. My three companions ran away back to the Sambaa village. The Masai captured the cattle which were in the area, then they carried me off to the place where they had left the cattle. Straight away, the Sambaa and Kwavi followed and while they were still some way off, the Sambaa started firing their guns and the Masai ran away. It was not a big raiding party—there were possibly thirty warriors there. It was a raid which the Masai call *Ol wamba* rather than a full scale battle which they would call *Olorora*.

I gave up hope of ever seeing my mother and father again. I was taken off by the warrior who captured me and he thought that he had been rather lucky, but his luck did not last for long because I ran away from him when we were sleeping on the banks of the Ruvu River, waiting to cross in the morning. I had never seen that river before nor had I seen a river like it. It frightened me greatly and it was this which gave me the incentive to run away. Without the river, I would not have escaped, for I thought that when I was being carried by my captor I would be too heavy for him and he would drop me into the river.

This is how I escaped: I crept out in the night when my captors were asleep and I thought that if I followed the same way that we had come, they would find me—I thought it would be better to follow the banks of the river since I had heard that the Zigua lived near a hill called Ol-masikirai by the Masai or Mafi by the Sambaa. I crept away quietly to the banks of the river which was only about ten yards away from where we were sleeping. When I realized I had escaped I was so pleased that I did not bother about the dangers of the night or of wild animals, but I was afraid of the river, although it was the friend which led me where I wanted to go. I followed the river to a hill called Mafi nearby, then the sun set, darkness came on and I wondered what I should do now that night was upon me. I decided that my only hope was to climb a tree and sleep there till dawn.

No sooner had I decided this when I heard a dog barking. I listened carefully to discover whether it was really a dog or whether it was a wild dog: I was able to distinguish because the barking of the dog was followed by the voice of a man which said in Zigua *Mguire*! that is "Catch him!" I was then no longer in doubt but was very thankful, although it was still dark. At that time I was about ten years old. I went to the village without fear because I knew that the Zigua and Sambaa were neighbours and that their language was closely related, like that of the Kwavi and Masai. As I had lived in Masailand I knew I could make myself understood in Zigua. When I entered the village, they were preparing to pay their respects to Chief Semboja since he was the paramount ruler over the Zigua. I knew many of them and they knew me because they had seen me in the Chief's village when I went with my father when he visited his friend Chief Semboja. After a few days, I was taken home to my poor parents whom I found mourning for me as they thought I was lost. When they saw me, they wept copiously: I thought they were crying about something else, but it was really because they were weeping with happiness to see their lost child again. But I did not realize this until later.

After that, I stayed a year with my parents. As the famine continued, I went to steal from the fields of the Sambaa. Long practice made me an expert at this, but one day I had the bad luck to be caught. I was taken to my father and he

secured my release by the payment of three goats, which is the law of the Sambaa in the case of theft from the *shamba* or theft of chickens. My father saw that my thieving habits would bring him into disgrace so he thought out a plan to frighten me. One day he called me, caught hold of me and tied my hands together. He said "Today I am going to take you to the Chief so that you shall be punished just as any other thieves are punished". I had seen with my own eyes this Chief ordering thieves to have their fingers cut off, so didn't I cry! But all to no purpose. When we arrived at the Chief's, I was placed in the hands of the guards called *Walugojo*. Then my father went to his friend and when I saw them talking, I said to myself "Ah! today I will part with my hands". The two of them sat down and after a bit, I heard the Chief call out in a frightening voice "Which is the thief?" and my father said "It is this one". There was a noise such as you have never heard. Some were saying "Cut his fingers", others saying "Leave him, he will not steal again". I replied "If I ever steal again, you can cut both my hands and not only my fingers". I was released and did not stay a single moment but ran off home. That day I was so frightened that I could not utter a word to anyone. I had thought that my father loved me, but now he hated me to the extent of taking me to have my fingers cut off. It was not really that he hated me but he wanted me to stop this habit of thieving and I see now he was acting for my own good to save me from myself.

CHAPTER III

SAMENI RETURNS TO MASAILAND OF HIS OWN ACCORD

There was an old Masai who had been captured by the Kwavi in a raid while he was still young: he was captured by the age set of the Kwavi called *Barisho* that is a matter of nine age sets ago. This man had lived with the Kwavi as a warrior and had then married and had children. When I was a child, this old man met up with his brothers and these brothers begged Chief Semboja, who in turn told the Kwavi that they should release their captive and return him whence he came, together with his cattle, his children and his wives. I don't think that the Kwavi relished the idea of giving him up but they obeyed their Chief since he was their ruler. The Kwavi could not have lived in peace but would have perished at the hands of the Masai save for the fact that this Chief was their shield against the Masai and they lived in peace under his protection. Thus the old man was given permission to return to Masai country and since he had married a woman of my father's clan, my father told him "I want you to take this child of mine and bring him up in Masailand where there are no fields from which he can steal; for if he stays here, one day the Sambaa will cut his throat while he is stealing". The old man cried with joy because he had a boy of my age, whose name was Simel and he was delighted to have a companion for him. When the time for departure came, my father called me and said "Tomorrow Simel's father will migrate and I want you to help Simel to herd his goats". Since Simel was a great friend of mine, I was very pleased with this arrangement.

CHAPTER IV

JOURNEY TO MASAILAND

We went from Mazinde and arrived at Mkomazi. On the next day we arrived at the lake called Manga which the Masai call *Embaladaka* meaning "the sore" because long ago it had no grass but only a dry hard crust. Subsequently it

filled with water because when the Mkomazi River was full of water, the Chief cut a furrow to carry the water into the lake and right to this day the water of Mkomazi River flows through this furrow. Leaving here, we arrived at the great River Moibo or Ruvu. We slept on its banks and in the morning undertook the task of getting the cattle across. The ford where we crossed was called *Sangaruna*: the water at this point reached to the neck of a grown man. It was said to be a good ford because the river was broad at this place but in other narrower places it is unfordable. We children had to be carried across. On that day, I realized I would not see my home again as I was separated from it by such a great river.

That evening, we arrived at the boma of an elder called Lekor ole Karaine where there were so many cattle that I was completely astonished. I said to myself that the cattle which I had been used to at home were cattle in name only. These truly were cattle both in size and in number. We stayed here for three days and I remember it was the time of the short rains because the grass and the trees were green and very beautiful. The Masai call the rain which starts in October and goes on through November and December *Olumurel* and thus I know the time when I left my father. From this village, we went to the middle of Masailand. I will not say much about the large numbers of Masai whom I saw; they were more than my eyes could take in. I was not astonished, however, by these people because they were like my own folk. That part of the country is called in general Olkonerei, up to the mountain of Losognoi and in the north to Sikirari and Engare Nanyuki, I was told, and in the south, its boundary is the country of Zigua. I have no doubt about this because I was brought up at Embukoi and Saunyi and Mbashi and other places in this area. Till this period, I learnt a great deal and lived happily as other children. The Masai do not approve of slavery but a man will place himself under another in order that he may get cattle and become rich. Others place themselves in servitude to get a wife and having got a wife and some cattle, such a man can go off wherever he wants. Such is called *Osinga* which might be translated as slavery but it is not slavery such as the Arabs and other tribes practised.

CHAPTER V

THE ANNIHILATION OF THE CATTLE AND THE DISPERSAL OF THE PEOPLE

When I look back and recall how old I was at the time in question, I think the events relating to cattle, which I record hereunder, must have started about 1888 (5). The Masai have one old established custom, that is if their area is not prospering, they choose a small group of people to take a present of cattle to their great medicine man who is called *Oloiboni* or more shortly Laibon, and inquire from him what sort of sacrifices they should perform to remove the trouble from their country. Such a deputation of people taking cattle to a Laibon is called *Olamal.*

One day when we were dwelling in the area called Mbashi, four people were sent on such a deputation; they were Maningo ole Sarikaki, and Olokuwya, who were the leaders. Another Malangwenani was of the age-set called Kishumu and the last of the age-set called Merisho. These were going on a deputation to Laibon Mbatian, the grandfather of the present Laibon: he prophesied to them forthcoming events.

When they returned, they told us that the Laibon had spoken thus: "Your cattle will be annihilated and the people also. There will remain one youth and one girl only and the signs shall be these. First you shall see many flies of a green colour with red heads which shall rest in swarms on the trees. Herders shall see game animals dying, but tell them not to kill them. When you see these things, your only hope is to migrate to Olngelata which is the large plain between the mountains Kilimanjaro and Meru." Oh, readers, do not think I was told this or I heard it. No, as each event occurred, I was in the midst of it. It was perhaps after one year that these events occurred as had been foretold. We were the herdboys who first saw the flies which had been foretold and who first observed blind game animals. I myself saw a Lesser Kudu in this condition; this is an animal with narrow stripes and long horns, which the Swahili call *Tandala Ndogo*. When we took this news to the elders, all was confusion: the whole region started to migrate straight away. I think we were perhaps three months on the move till we finally came to Lossogonoi, which was entirely new country for us folk from Olkonerei.

Departing thence we travelled for two days and on the third came to the river Kikuletwa, that is the large river which flows from upper Arusha: it is also called *Olkeju Sabuki*. We encamped on the far side and surveyed the large plain in front called Olngelata. I would like to point out that in all our cattle there was not one which was sick. Picture to yourself the cattle of a whole district, from how many villages I know not, all encamped on one bank of this river! At that time a Masai was a Masai: not the Masai of these days when a man having two or three hundred cattle is proud of himself and thinks he is wealthy.

Thus we arrived at the place which the Laibon had told us should be our refuge, so we awaited further events without trepidation. We dwelt peacefully here for a month: in the second month, we noticed that the cattle began to scour. Then they started dying in countless numbers. The dwellers of that area, whom we met, had already lost all their cattle and were keeping themselves alive only by eating dry meat. They were a great assistance to us as they helped us to prepare dry meat and they in turn were glad to receive fresh meat from us: by the third month, all our cattle were annihilated.

I recall that our herd had between six and seven hundred cattle, of which only three remained. Even today I can remember the names of these beasts and their colours.

As there were no cattle left, the warriors assembled to carry out a big raid to replenish the stock, departing in the direction of Mbulu where there were many cattle. When they got there, the luck fell to the Mbulu and all that remained for our people to do was to withdraw. But remember this: famine added to the fact that the Mbulu themselves were as fierce as our warriors, meant that those who returned were lucky enough to escape. From our house alone, three warriors went and not one returned. This raid was called *Ngumo lughuni*, that is "the raid of men's heads". The cattle disease was called by some *nengorotik* and by others *nolodwa*.

When they returned from this raid, the warriors turned into snatch thieves and anyone who had cattle or sheep left had them seized. Alas, what could the poor elders and the children do! Each man tried to save himself but usually unsuccessfully. People went hither and thither: some died from famine, and

others were killed when trying to defend their property. In attempting to recall the date of this dispersal, I think it started in 1890 or 1891; I remember well that I arrived at Moshi in 1891.

CHAPTER VI

SEMENI RUNS AWAY

Having eaten all our cattle and all the dry meat, we forded the river and crossed the plain to go to Sanya. The Masai call the small rivers *Noldireta* meaning "the pack saddles". Here our people dispersed amongst the Chagga, looking for food. If a bunch of bananas were obtained, each child was given three. Imagine that as a meal for a healthy being! One's brain began to spill out any sense which it had in it. My father had adopted a Pare youth whom he had captured in war called Mujala, who was a little older than I was. I think he was captured when he was fairly well grown because his teeth had already been filed. One day I asked him: "Do you know your own country?" He replied: "Yes, do you see that smoke?" I replied: "Yes, I see it, but that mountain is Oldonyo Oibor (Kilimanjaro). I hear that those who live there are called Makindara (Chagga) not Palakanga (Pare), and you are a Pare." At that time I had some knowledge of the neighbouring tribes whom I name above. To this Mujala had no answer.

I told him "I myself know that your country is not as near as this, so I will go to the place where we see the smoke, for it is there that those who go to buy food get it. Or shall we wait till we die of hunger? I don't know about you, but I can't stand this hunger any longer. If you don't come with me, I will go by myself this very night."

He replied "All right then, let's go together."

Since we slept together when guarding our father's lambs and kids, something under thirty, we were able to prepare for our journey without any trouble.

On the night in question we did not go to sleep. My companion suggested "Let's slaughter a goat and take the meat to eat on our journey." I replied "Let's not do that, for if we do, we will be followed with fury straight away: but if we go empty handed, those left behind will not worry us since they will know what has caused us to run away."

We went on discussing till nearly dawn. Then when we saw it was nearly morning, we departed in haste. As I was a lad very much attached to my weapons, I took my spear and my sword which were my ever-constant helpers. My companion also took a spear, a club and a gourd of water. When we left the village, it was still rather dark. We crossed two small streams near our village, those as I have explained called Noldireta (Sanya). We followed a small track made by people foraging for food.

When dawn came, I said to my companion "Let's not follow this road but travel to one side of it so that we shall avoid meeting anyone coming from where we are going, as they will know we are running away and would take us back home, much to our shame." My companion agreed, so we left the road and travelled parallel to it on the right but not far distant from it, perhaps only about seventy yards away. Thus we exchanged the risk of meeting people for the risk of running up against wild animals.

However, our journey went off safely: it must have been about three in the afternoon when we heard the sounds of people returning from foraging. We stopped till all had passed, then we took to the path since we knew that there was no other group out foraging except the party that had passed us. You may ask "What did you eat all this time and didn't you feel hungry?" The answer is we chewed the bark of certain trees which we knew were soft and juicy and certain roots which we were accustomed to eating before our cattle had died: the strength we got from these foods enabled us to travel to the camp where those folk had slept who had passed us on the road during the day. There where they had slept we found the fire still burning, as they had lighted some large logs which could burn for two or three days. Here we picked up some little bits of banana and potato and a piece of sheep's intestine about a hand-span long and this was our food for that night. At this spot two rivers ran close together. At the time we did not know what they were called but later learned that the Masai called them Movoroni.

We slept at that camp and in the morning forded the rivers and travelled some five or six hours. Then we saw cultivated fields in front of us and were happy. I think it must have been in the month of July or August for the stover was still slightly moist. We picked up little bits that had been dropped by the harvesters and chewed these. We then followed a road till we came to bananas and then saw that the path divided, each road going to a different house. We chose one road and went up to the homestead. Here we saw two houses: one a beehive hut, the other a *banda*. We looked into the first one; it was empty except for two cattle eating banana leaves. From the *banda* came the sound as of someone grinding, so we approached it and looked in. We saw a man with a sickle in his hand cutting up the leaves and stems of banana plants for his cattle. We ourselves waited at the door in the shade of the bananas. The man did not see us and we did not look at him closely, but we saw that it was a man. When he had finished his work, he came out holding a sickle and was startled. We also were startled as he had the appearance of a Masai warrior, having all the ornaments which such warriors wear. Since it is not the custom of Masai children when meeting adults to commence the greeting, we waited for him to greet us, but he just looked at us and we likewise. In the end I saw that I had better say something, so I greeted him in Masai "*Vava.*" He replied "*Hee!*" I said "*Kiata olameu*" that is "We are hungry." He went into the beehive hut and came out with two hands of ripe bananas and giving one to each of us, he left us there eating and went his way without bidding us goodbye. When we had eaten, we lay down there and then in the banana grove. We must have rested for about three hours. Then I was startled by the noise of someone setting down a load. I knew it was a bundle of cloth as I was accustomed to seeing the rolls of cloth which the Arabs had when they came to buy elephant tusks from us. When I saw this, I told my companion "We have been sold, but what can we do? Death in any form is no good." The man took his load into the house and came out again.

He signalled us to get up and follow him. We got up—what else could we do—and followed. We went through bananas for about half an hour and came out into a pleasant glade with short grass and large tall trees. On the far side, we saw a wall of stones surrounding some houses. We saw folk who looked like Masai warriors and youths all dressed like myself except the women who were different, they were wearing cloth which was clean and obviously washed. Their

bodies were clean and some were very light brown. The man whom we were following signalled us to wait outside and he went into a house. Lo! that house belonged to Chief Rindi (6), that is his proper name. The Masai call him Makindara and the Swahili Mandara.

Our captor went to tell the Chief "I have brought those children." He replied "Tell them to come in." We went in and found the Chief lying on a bed and we were each given European chairs to sit on. When we sat down, Rindi greeted us "*Loye, endasobui!*" meaning "Are you children well?" We replied gladly as the Chief knew the Masai language. He then asked us where we had come from.

Since I was the leader of our escape, I told him everything from beginning to end. He then asked us "Whose children are you?" I replied that we were the children of Lenyore. He asked "Is Lenyore of the clan of Kariongi?" I said "Yes." He mentioned those of the clan who lived at Sighirari and visited him from time to time. I said "Father, we live at Olkonorei and have recently moved up here, less than a year."

He believed our story and wanted to know all about us. He looked hard at us and said to my companion: "How is it that you a Pare got into Masai?" He replied promptly "I was captured in war." I then saw that the Chief was about to laugh but he did not want to show his smile since he was truly a chief and not a man accustomed to joke with common people. Then compassion entered into him and he sent for food, but we did not know this till we saw two people coming in, one with a bunch of green bananas and the other with a leg of beef. He said to me "Can you eat this food?" I replied "First of all we will eat the meat for three days, then the bananas will be ripe and they will be food for a further four or five days." When he heard this, the Chief again wanted to laugh. I think he knew that people who had experienced famine knew how to ration their food. He told those who had brought the food to take it to the kitchen and cook it and when it was ready, bring it back so that we should feed in his presence. We stayed with the Chief in his house and he asked me about this and that and I replied to everything that he asked.

My eyes wandered round examining how the house was built. It was built on piles with a space underneath where goats could enter and stand without their heads touching the floor. This was not of planks but thin poles sewn together like a mat. On entering, one climbed up some stone steps. From the time we entered the house, I did not see the Chief sit up, much less stand and since he was lying down, I could not examine him closely save that I saw he was blind in one eye, but cannot remember which. His ear-lobes were pierced and pendulous, hanging down as much as the ears of Lenana ole Mbatian, the Laibon of the Masai. I then looked round at the pictures which the Germans had given the Chief and which filled his house everywhere.

Then food was brought in on a large wooden tray. The bananas had been peeled and the meat cut into small pieces and then mixed with the bananas. We ate till we were satisfied but even then there was some left. The Chief said to us "Today you have been served, but tomorrow you must cook for yourselves as these people have other work to do." He told us to go to the *banda* in which our food had been cooked.

This food sufficed us for two days. On the third day, the Chief called us and said "You have been given food by me as guests. I have here many children who have been captured in war. They look after themselves, some by stealing

other folk's food and snatching bananas, potatoes and other food in the market: but they are not allowed to steal from the animals that they look after. Such is the custom of our country. The children born here are not allowed to steal and you will be counted in that group." We did not think this very strange since even amongst the Masai, the children, even when well fed, think stolen food is much sweeter.

CHAPTER VII

WHAT SAMENI SAW AT THE CHAGGA CHIEF'S

Chief Rindi lived at the base of the mountain looking out over the plains in a village called Shinga (Old Moshi). He suffered from a weakness of the back so that he did not leave his bed but was carried on the bed when he wanted to go outside or to travel to other places. His boma was surrounded by a pleasant glade with tall trees and soft short grass. This was in effect his audience hall where he conducted the business of the whole country.

When he had anything to say to his people, he was carried outside on his bed and likewise when the people wished to acquaint him with anything, particularly matters of war. I have forgotten to translate the meaning of the name of the chief's village. Shinga means "the ultimate gate of the country to enter or to depart from". The country of Chief Rindi was not large but his people were very fierce and very intelligent and warlike. There were two particularly noted leaders in warfare: the first Merinyo—the name in Masai meaning "one who does not retreat in battle"—the second Mdengire.

The chief also had his councillors and sub-chiefs, every village having its own sub-chief. I saw much business conducted in this glade. One day the war cry was raised indicating that enemies were approaching. The call is *ewo omi, ewo omi* meaning "you men, you men". When the cry is raised by one man, straight away it is taken up from village to village like radio.

Straight away one saw from every village the companies of warriors rush down the hill, each company led by the sub-chief, in front of whom no one might proceed. By this time the chief had also been brought out into the glade. You must understand that this was not actually a raid but a practice so that the warriors should not relax. The Chagga of Moshi were those who gave the whole country its name. Their weapons were spears and shields. I did not see a single gun nor yet a bow. The companies first to arrive were counted as friends, those who came in late were regarded as enemies. The friends taunted the enemies as they arrived calling out *omangi ooi* ! until all had arrived in the glade. If a stranger saw all this going on, he would think it was actual war because the companies closed in and beat each other with their clubs but they only hit the shields of the opposing force. When the practice was over, they went and sat in front of the chief, the councillors and sub-chiefs sitting nearest to him.

The chief had his interpreter so that when the chief addressed them, the interpreter shouted out the words in a big voice and from amongst the people there were those who replied on behalf of the whole company. After the chief had addressed them, all came to converse with him, to sing war songs and to praise him. One day I remember, the people brought six cattle and one goat; the latter so that the chief could join in the feast with the people since he himself did not eat the meat of cattle.

The youths likewise had similar engagements, but the shields of the youths were made of the bark of the tree called *Mringaringa* which would turn a spear thrown by one who is not particularly strong. The chief turned out to watch the youths at practice. Their ammunition was the fruit of the Sodom-apple. The chief was delighted by the bravery of his people and they in turn were complemented by the chief. The Moshi people have no use for cowards. I saw and spoke to two youths called Msarikei and Singano who wore the clothes of girls. They were being led around by two people: each had a bunch of bananas cut for him and placed on his head. Thereupon their clothes were girt about their loins and they had no escape other than to cross the glade where the youths were playing. They were greeted as females *kafonyi mae*! When they put down their loads, they went to the chief who greeted them *kafonyi kagora*! and they replied, with humility, "If the Tarimo are no more, the lion alone will remain". Tarimo is the clan name of the chief of Moshi.

When I reached Moshi, I saw these same people whose conduct I had witnessed. When I saw these two coming before the chief, I inquired "Are these people men?" I was told "These are men who ran away in a battle with the Kibosho the other day; perhaps you will be treated thus if you also prove to be a coward". How could people like these fail to be brave in defence of their country. It is my personal opinion that if the Europeans had not arrived, the whole of Kilimanjaro area would have been subjugated by Moshi, though perhaps Kibosho might have prevented this.

I had already heard before we migrated from Olkonorei to Sighirari that there were white people called Europeans. It was said that they were transparent so that you could see their insides and their beards were so long that when seated on donkeys, their beards trailed behind. This was when I first arrived at Kilimanjaro and so long ago so that I had almost forgotten this story. At this time I saw quite a few *bandas* of these Europeans, but I did not see them themselves.

CHAPTER VIII

SAMENI GOES TO SCHOOL

One day, two Europeans turned up, who were missionaries (7). They were encamped in the hills near the chief's village only about an hour's walk away. Their purpose was to ask for some children from the chief, whom they could teach. The chief did not refuse but replied "Go now and come back tomorrow for at present the children are scattered. When they come back in the evening, I will give orders for them to await you."

We children did not know this but when we returned in the evening from our thieving and snatching, we heard a song which ran thus:— *Wa-nake wako-Mangi, ngama mlaende kundufo*. Each one of us wondered what was going to happen tomorrow. In the morning we turned up to hear the orders of the chief. We assembled near the door of the chief's house not less than forty of us. Two of our number went in to fetch the chief out. He told us "Stand up one by one" and thus I knew that this was some sort of selection. Those who were large were placed on one side and the smaller ones on another. Anyone aged eighteen to twenty was permitted to depart. I, poor fellow, was only aged about thirteen. Looking back and estimating the date I think it must have been the year 1891.

After the big ones had been permitted to depart, there remained only thirteen. To those who remained, the chief said "My children, those good Europeans who have come here to worship God came here yesterday wanting my children so that they also should know how to worship God. Didn't you see for yourselves how when they came here they brought many children along with them from Taveta? And how others of our own children joined them?"

My companions who knew the correct answer replied "True, oh lion."

He turned to me and said "Lemenye, have you seen these white people?"

I replied "I have not yet seen any."

He said "You will see them today but do not be afraid, they are good people who love children."

We then went off to eat what we had grabbed and then waited to be taken away by the Europeans. It must have been three in the afternoon when the Europeans arrived together with a group of youths, perhaps ten. When I saw them, although I had been encouraged by the words of the chief, fear entered into me completely, though I was consoled to see the youths who came with the Europeans. I saw one of them turning round something white. I heard them singing and then all knelt down.

When they had finished this, the chief bade us farewell with the following words: "My children, go now but do not forget to come back and greet me." And we bade farewell to the chief with these words:—"Live well, oh protector of the cattle! live well, oh lion!" The Europeans also bade farewell to the chief with the same words.

Thus we travelled and when we arrived in the evening my eyes had had their fill of examining these Europeans. All that remained now was to know what would happen to us. We heard a whistle blown, which was the assembly call of the place and we newcomers were called up. The old ones came along out of curiosity to see what we strangers were going to be given, although they knew very well what would happen to us. The order was given that we should stand to one side and the Europeans gave each a piece of "crow" that is black and white checked cloth to cover himself and a plate and spoon.

It was now food time, so we went to the cooks and each man had his plate filled full. This indeed made us so happy; even now when I remember it, it makes me laugh. After receiving our food, we were shown into a place which had been prepared with boards to eat off, but first we prayed to God. I started eating my food before grace and the others laughed at me, and later I laughed at myself.

We were then taken to our sleeping quarters—five children to a *banda*. Luckily in my banda there was a Chagga youth who knew the Masai language because his mother had run away with him to Arusha Juu as he was threatened with death by the chief of Chimbi (Kindi), who had been subjected in the past by the great Chief Orombo (Horombo). The chief of Kindi was jealous of this lad because he was a grandson of Horombo. When he became old enough to look after himself, he came to Moshi with his mother and went to live with the Europeans at the mission. His name was Tengia. He was a little older than I was, but he did not look down on me: we became very friendly and he interpreted for me when I wanted anything from the Europeans. And so to bed.

In the morning when the whistle blew, our companions who were used to it woke up straight away. They in turn woke us up and we responded to the call. A European led us to the church. When we had finished our prayers, he led us to a store containing hoes and *pangas*. The other section of this store was full of food—bananas, ripe and green, buckets of milk and potatoes. Each child was given two bananas and issued with hoes and so we went off to the *shamba*. Although I knew nothing about cultivation, I was not at a loss, as I just copied what my companions did. Returning at 8 o'clock from the *shamba*, we found our food ready. After food, we new boys were called and each was given two cloths, two coats and two hats, one for everyday use and the other for Sundays.

After a few days, we became used to the routine of the place. The two compulsory tasks were firstly to cultivate in the *shamba* every morning till eight o'clock, the second was school from nine to twelve and two to four; but nothing worried me. I performed all my tasks happily.

Now let me return to the two Europeans whom I first found so strange that I feared them. Soon they became my beloved fathers. Both were English—one was a clergyman, Mr. Steggall, M.A., at this time aged about forty-six. The second was a doctor, Dr. Baxter. The Chagga called him Mangerero because he had a beard that came down to his chest and a moustache that hid his mouth completely. At this time he was aged about sixty.

Let me say now that the bad luck, which had followed me up to the time I arrived in Moshi, now left me. Food and all other necessities of childhood were provided without trouble, so that I did not have to think which village I should next raid to steal or snatch my food.

I quickly settled down with my companions of both tribes, that is Taveta and Chagga. The Taveta had followed their teacher who had started his teaching at Taveta, of which mission Moshi was a new branch. There is no need for me to recount at length every little event, but all these things occurred in the year 1891. I think it must have been about three months later when I had already learned my ABC when one day a man came in in the morning and said to our teacher "Mangi Rindi is dead, but don't tell the children or they will spread the news to strangers of other countries and this will bring trouble to you." (8).

Our teacher said "Today there is no school because I am going to Shinga to greet the chief." He called those pupils who had followed him from Taveta as they were older and were better able to keep secrets. Their names were Yohana, Stefano, Paulo and Danieli. Our teacher went off with them and returned in the evening. They told us nothing and we had no reason to question the doings of the grown-ups. The custom of the Chagga when a chief died was to keep it secret for a whole year. The reason for this was to avoid attack by other countries before a new chief was installed.

This chief had been a snarling lion in his life whom no one could approach: what would happen now he was dead? After only a few days, his successor was appointed. The sons of chief Rindi whom I knew were Mali, the first born, Kirita, Salema, Mafurunya and Bwanadachi, who was the last born and was very light coloured, but not as light as a European. Following the death of the chief, we heard that his first born son, Mali had been appointed in his place. Those of our companions who had gone that day, told us on return "The chief died at seven

in the evening. Later we were shown a great hollowed-out log like a big beehive. It was made to hold the body, which later would be taken elsewhere. Those who were admitted were trusted people only and not common folk."

Once Mali was installed, many wicked things occurred; not only Mali himself but many others were also involved. We heard that Kirita had been killed and the reason for his death was that he had said "Now that our father is dead, let us divide the chiefdom—I to rule half and my brother to rule half, and the warriors we will also divide up in like manner."

When the elders of the country heard this, they saw that the country would become disrupted and their enemies would then step in. They invited Kirita to a feast and killed him with clubs. The country was then disturbed by war. It was said that Mali did not like the idea of his father being friends with the Europeans, but he could do nothing until he was the ruler (9). I don't know why he did not like the Europeans as they had loved Rindi. They had given him guns of every sort; Mali himself was given a breech muzzle-loading rifle called *Korofindo*, but he definitely disliked the Europeans and once his father was dead, he did not hesitate to provoke them so that war broke out straight away. How he provoked them I don't know, as I was a child and had no reason to inquire.

CHAPTER IX

SAMENI SEES A BATTLE WITH HIS OWN EYES

What follows, I saw and heard myself. Our teacher and father tried to mediate but to no purpose, although he persevered for a long time. Though he warned and entreated, nothing penetrated the ears of Mali. In the end Mali said to this mediator "Let them come without delay."

The cunning of the Chagga was this, that they knew there were only a few approaches from the plains into the banana belt. Now these tracks coming from the plains when approaching the mountain penetrated into deep forest to a depth of about four miles until they came out into open country. From here it was not less than three miles until the bananas were reached. The Chagga had their scouts in the bush to let them know when enemies were arriving, whilst others dug trenches along the side of the paths in the forest on both sides, leaving a narrow space in between.

When the scouts reported that the enemy were likely to arrive on the following day, the chief sent a man to our teacher to tell him "Be on guard, you and your children, and go behind the hill so that you shall not be hit by bullets."

The enemy had likewise warned our teacher, though I don't know by what means. That night we busied ourselves in cooking food and sending off our belongings in advance such as the rolls of cloth and boxes of beads which were the currency of those days. We then went to bed and in the morning, the Chagga went and placed themselves in readiness in the trenches. Those with spears stayed in the open country to draw on the enemy so that when looking at them through their glasses, they should say "The Chagga await us." Since the Chagga were accustomed to guns and had seen the German askaris being taught, they themselves knew to wait for the order "Fire!" and then all to fire at once.

The enemy saw no need to take precautions when passing through the forest and the Chagga let a few of them through with one European. Oh! my friends, one volley by the Chagga and the war was over. Those who were in front got as far as the companies who were waiting for them in the glade but what could they do? The European himself was killed there in the glade and one askari. Our teacher had his binoculars trained on the glade to see what was happening; he told us that a European had been killed where all the people were assembled together with the chief. He said he was going to see what was happening and would beg permission to bury the European.

It was about two o'clock when our teacher went down the hill and saw that truly a European had been killed. When he asked permission of the chief to bury him, he replied "If you want to bury this man, dig a grave deep, place him inside, then get in yourself and bury yourself. If I let you bury him, when will the hyenas of my country get another chance of tasting white flesh and how will Rindi know that truly his son is a man?" Our teacher was at a loss to answer but requested permission to cut a little hair from the cheek of the dead man to place in the diary which he wrote up every day. Our teacher returned at about half past six. Those of our companions who had gone with him gave us the details of what happened.

We went to sleep and on the next day there was no work at all; the reason being that our teacher was a clergyman and his heart was full of compassion. What did he feel when he saw life being needlessly lost? His heart was full of grief for many days. From time to time when I recall the events of those days, I cry myself.

Since we had no work, we ourselves went to look at the field of battle. Don't think it was a place that was cultivated; it had always been open country and was called Kiumanguku, the meaning of which I do not know. When we arrived, we saw a great crowd who had collected the booty, guns, boxes, cartridge belts and all such things.

There was great rejoicing that day amongst the Chagga. They made up a song which said "*Ngoti ilelemba mandumbo*." Now *ngoti* means a muzzle-loader and *mandumbo* means a rifle. Thus the song means the muzzle-loaders beat the rifles.

I have read Mr. Dundas' book but I think his informants were not well acquainted with these events since they said that the European was not killed there but died of arrow wounds in the forest, but this is not so: a European died there on the spot at Kiumanguku. The one who was shot by Kamba arrows was called Kashomo (10). He was with the scouting party in this engagement and I am uncertain whether he was a European or an askari. It was said that there were three Europeans altogether: I don't know what happened to the other two. After this engagement, chief Mali was given a praise name *Kiusa*, meaning "The Clearer" that is, he had cleared out the enemy.

The war was over, the Chagga shouted and sang with joy and triumph over their victory. We and the missionaries remained where we were. We wondered what the Chagga were thinking with respect to our teacher since he was a European. Now we had provoked the Europeans and it had been long said "Do not fight with the Europeans because they cannot be beaten." Now the Chagga had done that very thing which was forbidden. I knew that we boys were not in danger, but what about our beloved father, what would happen to him,

would he be killed in front of our eyes? Understand that these thoughts were mine alone; what my companions were thinking, I don't know. When I saw that nothing happened, I thought my companions were all fools and I even thought the same of my teacher, but afterwards realised that it was not folly but bravery. He hoped to die in the service of his Saviour, Jesus Christ.

And had I known, I would not have been content to remain silent in this dangerous situation. Since I was unable to express my thoughts to the Chagga children, I besought the one who had come from Taveta called Yohana who was a close confident of our teacher, for he indeed was the first Christian to be baptized by him. He consented to listen to me and I told him all that was in my heart. His answer was short, he said "Oh, you are a child. Now go, I have heard enough but don't say these things again. Be quiet."

I don't think that Yohana wasted much time in telling the European my ideas, although they were only the thoughts of a child. I think that even Yohana was worried by them and that was why he did not delay in informing the Europeans. I knew that he had told them because when we came out from school at noon, the master called me "Lemenye!" which was what the Chagga called me instead of Olomeni. I went to him and since we were not alone together, he said to me in the Chagga language *Ulaoluo, ngiiwokofo* that is "Do not be afraid, I will not be killed." Thus I went away somewhat consoled and after a few days, a letter came from his friend, Captain Yohanas who had arrived at Marangu at that time, telling him to quit Moshi and return to Taveta.

Our safari to Taveta was a secret one. Every night we took our possessions into the bush and there others received them to take them to Taveta, till all the materials had been removed and we alone remained. For us the move was not difficult and none of the children refused to go because we had no country, all being captives.

CHAPTER X

FROM MOSHI TO TAVETA

On that day we did not follow our usual routine except for school and worship. In the afternoon, each one cooked for himself. Then at eleven at night we started, but as it was night, could not go very fast especially as the roads in the old days were very narrow and had stumps, stones and holes in them. Further, we were fearful lest we were being followed, but by four in the morning, our teacher blew his whistle and we all stopped. We waited for each other till all had assembled, then he said "Let's sing the hymn 'Jehova leads me'." Thus we worshipped.

He asked us "Do you see Manua?" Those who knew the place said "Yes." It is a hill regarded as the boundary between Chagga and Taveta. I was a stranger to these parts since I had come from Masailand I was quite ignorant about this part of the country. From here to Taveta was three hours going. We arrived at Taveta at about eleven in the morning. I cannot describe the rejoicings manifest on every side, both by us strangers and those whom we met there. Our teacher let off ten or more cartridges and the Taveta folk turned out to greet us.

Now let me turn aside a little bit from the story of my life so that I can describe to you the customs of these new people whom I found very similar to the Chagga; but there were, in fact, many differences. Their circumcision was in accordance

with the Masai custom, likewise their greetings, as they greeted by age-grades. The ornaments of the women were like the Masai as also those of the girls. Their dances and songs also, but if a Masai heard them singing, he laughed till he fell down! They knew a little of the Masai language but it was mostly those old men who had reached the age of seventy or eighty who understood it.

One day I came to realise that they had not copied the Masai in every respect, but rather they had copied the Kwavi since I was conversing with an elder named Kikoi, who I think must have been aged about seventy, I heard him speaking in pure Kwavi. I asked him "Father, why is your speech that of the Kwavi?" He replied "Do you know those people?" I told him "It is only recently that I have come to live amongst the Europeans." He said "Child, you have told me an amazing thing. In what country do these people now live?" I told him they lived at Oleleso in the Usambara mountains. He said, "Truly I heard that name when I was a youth."

He then described to me how he came to Taveta. "I remember long ago when I was a child we lived on the banks of the river called Moibo or Ruvu at a place called Osugati or Mvungwe. The people living on the other side, that is in the area of Naberera and Lossogonoi, all those were beaten up by the Masai (11). Our clan, called Engang Elema, was more numerous on the side of the river called Osugati. When our fathers heard of these defeats, we moved over to the hill called Lalema, the hills of Pare."

I interrupted him a little to check whether he was telling the truth. He had mentioned one Lengunat, a man I had not heard of before, so I asked him "Had he any children?" He replied, "Yes, he had one son called Mtango." Thus I knew he was speaking the truth, as the name Mtango is the name of the Kwavi Laibon, which I had frequently heard when I was still at home, though at that time he had died, his successor being Kirigo, son of Mtango. He was the father of Maitei, who was the father of Moreto, the Laibon of all the Kwavi wherever they may live.

The old man went on with his story. "Thus we lived—the original inhabitants in the hills and we on the plains below. When we saw Masai carrying strife in all directions, we crossed over the hills to get farther away from them. When we reached the descent on the other side of the hills, we found a great wilderness into which we penetrated, for we saw that we could there live in peace. We lived there for several years without fear, then by bad luck, cattle disease came in and all the cattle died in three big villages. No one had any cattle left, for those which remained, we ate owing to famine. From those villages no one knows where his companions went, I only know that we continued to press on through the wilderness. First we ate skins, then we ate tortoises and the remains of animals which had been killed by lions. Eventually we came to the country where we are now.

"One day, a hunting party from our area met up with a party of Taveta who were also hunting. That day we did not attack each other, but waved green branches which are a sign of peace. After a few days we moved closer to one another, the Taveta being attracted when we were skinning a zebra which we had caught in a pit-fall. It was amazing that people who could not understand each other's language should sit down and eat together. We gave them meat and they went off home. The following day three men and two women returned.

hey brought bananas, maize and potatoes to our village which they could not iss because it was most conspicuous beneath the hill called the Hill of ie Rombo. It was we who were called Rombo and the hill bears that name till oday. Our people were not all in the one place. If you inquire all around, you ill hear that some went as far as Himo where they saw three bomas of those Iasai who are called Kunono, that is, the smiths. These people tried to persuade s to go and live with them. Some refused saying 'Who was it that dispersed us nd brought us to our present poor status, was it not they? (the Masai). We will ave nothing to do with them.' Thus our boma split, three elders joining in with ne Masai, namely, Tarkashi, Lekuluva and Ngombe.

"We who remained threw in our lot with the Taveta. Each was assigned to a articular clan, but we were all placed in one area. We were not prevented from ollowing our own customs. Each one was given a plot of bananas so that we ere able to hold circumcision feasts for our children. As the beer of iat country was banana beer, with which we were unacquainted, the locals helped s to prepare it. Our warriors danced their own dances and the Taveta came and oined in. We realised that these people had no dances of their own except that he elders sang at the time of circumcision. The Taveta requested that their hildren should join in our circumcision ceremonies and the elders straight away greed as we liked these people very much. Now our customs are combined in ll such matters."

The old man Kikoi spoke truly. I am only a youngster, but I think that the Taveta had not been in their country many years before the Kwavi arrived and oined up with them.

CHAPTER XI

TO THE COAST

Don't think from what I have said above that I am going to speculate on the origins of all the tribes whom I mention. No, I have my own job which I do not want to lose sight of, not for a moment. Now regarding school and preparation for baptism, I passed my examinations without trouble and was baptised on the 2nd April, 1893. I was given three names—Justin Silvan Lemenye. I beat my companions in every examination, even those who had commenced in the Taveta School. At this time I also heard that the Chagga of Moshi had been subjugated.

After a further two months, the time drew near for Mr. Steggall to go to Europe and porters arrived from the coast. These came from the mission village called Kisauni (Freretown). When all was ready for safari, my teacher did not want to leave me at Taveta. I think he saw that I would not get on well because there was no teacher to carry me on further. He talked to Yohana who was going to Europe with him and he told us that three children would be selected to go to the coast with him. Oh, was I not pleased! not because I loved the coast but because I would not have to part from my teacher so soon.

We left Taveta, but I will not trouble you with the description of a safari in those days. You will understand what it was like when I remind you that the year was 1893. The journey took twelve days. The first civilization we struck was the mission village called Rabai. Here we rested three days waiting for

canoes to take us to Kisauni. Here everything was different from what I was accustomed to—the people and their *shambas* and even the trees. Now I was going to see the sea which I had heard ebbed and flowed. Next day we went off and after about four hours we came to some low hills and arriving at the top, we looked in front. Lo! why was the sky on the ground there in front of us? I looked up to see whether truly the heavens had fallen, but without saying anything; I kept my thoughts to myself. We straight away saw a canoe on the water approaching rapidly. It came to the landing place and while the canoe men rested, we went down to meet them. I was amazed by their clothes. There were six of them and all dressed the same. I was not afraid of them but was surprised to see how they dressed.

Now we boarded the canoe and, out of all those who had come from up-country, only one was used to sailing, the rest of us were very frightened. That one was our teacher and, of course, the sailors themselves who were used to sailing since their birth. As our teacher knew that some of us were a bit frightened, he did not go to the front but stayed with us in the body of the canoe. Yohana, who was adult, was the first to climb the gangway but although he had prepared himself for the ordeal, if the sailor called Peter Sahara had not caught him, he would have gone overboard and been drowned. When he was safely aboard, Timoteo followed without showing any fear. I began to hesitate and to think, "What will happen if the canoe men tire in the middle of the trip? There we will be in mid ocean with the shore miles away. Why did we leave our friends sitting happily on dry land and come to a place where the water has no end? What shall I do if this what-you-me-call-it falls into the water?"

All this time I hung back with the intention of running away but lo, Mr. Steggall knew what I intended to do. He came up close and caught hold of me and called the sailors to help me aboard. I did not cause them any trouble, but went in all right as I was held on both sides. I sat down and my companion Filipo followed me without trouble. Lastly, our teacher came aboard. We pushed off and I crept under the seats and lay quiet as I did not want to see what was happening. After not less than four hours' sailing, we came to port and disembarked without trouble.

Here we were led to the house of Rev. H. K. Binns, the founder of the village of Kisauni (Freretown). I wanted to be alone so that my eyes might wander and look around at all the strange things! The house of Mr. Binns was quite enough, for although it was only a single-storey house, it impressed me so much that when in the future I went to Mombasa and saw the houses there, I was not amazed as I had become used to such things by then.

One day before my teacher had departed to Europe, a man called Thomas England took us and our teacher for a trip along the coast. This was an outing for his pupils, he being head teacher at Kisauni which was the mother school of all the C.M.S. schools on the coast. After we had travelled some distance, I became frightened by the limitless aspect of the sea. "Where does it end?" I asked. "Europe" I was told, "where some people live completely surrounded by water." This was the last of my questions. I did not ask any more but just looked and was silent. We returned home and the next day was Sunday. The mission bell was in a hut of its own and four askari used to beat the hours on it. On Sunday it was rung to call the people to church. This was the first time I had really seen people go to church: it took them half an hour to go in. First came the girls who

were boarders, looked after by European ladies, and then the boys led by their elders, but these were not Europeans. These two groups entered the church first as they formed the choir. The organ was played by James Damler who was a deacon.

He was amongst those whom the English rescued from Arab slavery. He went to India to be taught and made great progress. He knew both English and Hindi. There were two deacons here at Kisauni—James Damler and Ishmail Semler, and another at Rabai called John Jones: they had married and had families in India.

NOTES

(1) Professor Stratton of Cambridge University, in a personal communication states that the Great Southern Comet of 1887 was a striking comet with a long straight tail of about 30°. It was never seen in the northern hemisphere, but was visible for about ten days in the southern. No other comet was visible about that time, so this identification can be accepted with certainty.

(2) The poverty of the Kwavi at that time was not due to the rinderpest and famine shortly to be experienced but to the fact that they had been chivied from pillar to post by their then more powerful brethren, the Masai.

(3) Semboja, Chief of the Sambaa, died in 1895. Briefly his history was this: when Chief Kimweri Nyumbai died in 1869, his grandson Shekalavu inherited, since the latter's father Mkande, Semboja's first born son, predeceased his father. Another of Kimweri's sons, Semboja, contested this and was banished from Vuga, the capital. Thus the tribe was split, half following Shakalavu and half Semboja. This accounts for Justin meeting a Chief of the Sambaa near Mazinde in the lower areas.

(4) The Masai are divided into age-sets; a new one being inaugurated approximately every fifteen years. Thus if one knows a man's age-set name and his status or grade (i.e. warrior, junior elder, senior elder, etc.) at the time of any given event, the date can be fixed with reasonable accuracy from the following table:—

Age-set	*Initiation commenced*
Merishari	1811
Kidotu	1825
Dwati I	1839
Nyangusi	1853
Laimer	1867
Dalala	1881
Dwati II	1896
Dareto	1911
Derito	1926
Kalikal	1945

The Kwavi have a similar system, but with different names and dates; the equation of Justin's father with Chief Semboja can only be approximate, as the Sambaa have no formalized age-grade organization.

([5]) Rinderpest, which the Masai call *ludwa* came to Africa from Asia via Arabia and the Horn in the mid-eighties, and swept through the continent like wildfire, as both cattle and game were highly susceptible. Its advent in East Africa is dated between 1888 and 1890.

([6]) Rindi is a well-known Chagga character who features prominently in the literature. Van der Decken visited him in 1863 and Charles New, an early missionary, gives a graphic account of his reception in 1871. An illustration in his "Wanderings in East Africa" shows Rindi in a drunken rage, being restrained from attacking the bearded missionary, who sits unperturbed on the floor. J. Thompson, visiting Moshi in 1883, and H. H. Johnston in 1884, both give first hand accounts of their meeting with the powerful Chagga. It is interesting to compare their descriptions with those of Justin who as a small boy visited Rindi a few years later.

([7]) In *The Teita* by Rev. P. G. Bostock, reference is made to Rev. A. R. Steggall and Dr. Baxter, who passed through Teita *en route* Taveta and Kilimanjaro in 1886.

([8]) Dundas, C. in *Asili na Habari za Wachagga* gives the date of Rindi's death as 1st November 1891.

([9]) In *Kilimanjaro and Its People* Sir Charles Dundas describes the incident as under:—

> "In the following year, 1891, Rindi died and was succeeded by his son Meli. His younger brother, Kirita, apparently plotted against Meli, at least he attempted to obtain an equal division of Rindi's property and demanded the right to maintain a retinue of 100 followers. Fearing what Kirita might further aim at, Meli's mother now poisoned Kirita, and not content with this, caused him to be strangled in his sleep. As he died Kirita cursed Meli and blessed his younger brother Salema, and to this curse is attributed Meli's misfortunes as well as Salema's accession in later time."

In spite of the slight discrepancies in the method of killing Kirita, it is remarkable how accurate Justin's account is.

([10]) There is a *Note on German Graveyard at Old Moshi* by H. W. E. Ginner in *Tanganyika Notes and Records* No. 25, recording the graves of Wilhelm Wolfrum, Lieutenant, killed in action 1892 and Emil A., Lieutenant, killed in action 1893. Wolfrum's death is referred to by Dundas who quotes an open letter, written by a German condemning Karl Peters' regime " . . . you are responsible for the deaths of our comrades Bulow and Wolfrum . . . " Dundas (*op cit.* p. 101) states "In the year 1892 it happened that a German soldier was killed on the boundary of Moshi and Kirua by Kirua men, the cause being an assault committed by the soldier on a Kirua woman." Dundas describes how Bulow, the German commander then resident at Marangu . . . "marched against Moshi with some 250 native soldiers. He was severely defeated, and after losing the greater part of his force, including two Europeans, he fled, wounded himself, with a remnant of his troops to Marangu. In the night, after hastily destroying some of his arms, Bulow fled to Kahe, where he was killed by Kamba hunters in the employ of Meli." Thus Dundas and Justin agree about the death of Bulow, alias *Kashomo* in the Kahe forest. Dundas

gives the date of the "return match" when the Germans defeated Rindi as 11th August, 1893, a year after the first earlier action. Thus it can be safely deduced that the German whose death Justin witnessed was either Wolfrum or the other European killed in the 1892 action. Ax must have been killed in the second engagement.

([11]) This elder, aged seventy in 1893, must have been a child say 7-14 in the period 1823 to 1830. In a paper on *Re-assessment of the Masai Age-Grade System as a Guide to Chronology* I have arrived at the conclusion from other evidence that in the period 1825-1839 the Masai so beat up the Kwavi of the Naberera area that they withdrew, whereupon the Masai proceeded to colonise the area. This tallies entirely with the evidence of Justin's eye-witness informant.

[*To be concluded*]

DANCING CLUBS OF THE NYASA

By Pamela Gulliver

The Nyasa of Songea District have a highly organized system of musical contests consisting of male and female dancing and singing teams with a band accompaniment. Almost every village has its own club or *boma* and the performances are called *mganda* or in the case of the women, *kihoda*.

Nyasa have entered for these contests since at least 1926 when the Liuli club was first started. It is said that the idea was first brought over by askaris in the K.A.R. who came from Tonga country in Nyasaland, and even today teams occasionally sail across the lake to Nkata Bay and dance with the Tonga, Kalanga and Henga tribes. The usual range however is Nyasa country and over the border into Portuguese territory where the Mwera tribe live. Since 1953 the Tengo have also started groups and visits have been exchanged. No teams are known in neighbouring Ungoni, Manda or Upanga country.

The male teams, which are entirely separate from the female and dance on different occasions, are highly organized; during the season, July to November, fixtures are arranged at fortnightly intervals with neighbouring villages which are sometimes four or five hours walk away. Each club has its individual name, thus Chimate was "Zanzibar", Liuli "Zambwe" with team the Koreans, Ndengeli "Masoko", Mhalo "Sumu" with teams Nkalango and Sepaganga, Mbamba Bay "Kenya". Any person in the neighbourhood is free to join but in practice the main body consists of the young men and boys of ten years upwards. Some groups include older men in an official capacity.

Liuli team which, of the five I met, was the most highly organized, had a large body of officials who all wore smart uniforms (of the commissionaire type) that came from South Africa and were the property of the group and not of the individuals. The first official was known as *Kingi*, followed by *R.S.M.*, Sergeant Major, *P.H.D.* Public Health Department—responsible for the laundry of uniforms and cleanliness of the junior members! In addition the *Governor*, *Judgi*, *D.C.*, *Doctor* and *Guardian* were *ex-officio* members. The rank and file were either corporal, lance corporal or askari. This military hierarchy seemed general although more developed in Liuli, which was also the only team with military-style uniforms and red shirts for the star performers.

Members of a *boma* take the *mganda* performances seriously, and dancing teams and bands practise frequently during the week to improve their technique. The members of Mbamba Bay team, at the contest I watched, were entering the lists for the first time for four years and did not consider themselves eligible to be judged on this first occasion which was to announce their re-entry. In three months they felt they might be worthy of serious criticism.

Contests usually take place at weekends. At the Mbamba Bay performance, the visitors started to arrive at 5 p.m. on the Friday evening, on foot or bicycle and made their way to the dancing ground where the local inhabitants collected and took them to their homes, where they stayed for the next two nights. All

'ood was provided by the hosts but no beer. This was stressed and was obviously rue and, together with the fact that dancing always finished at nightfall, ıccounted for the tacit approval and even encouragement of the Missions. The following morning dancing had already started at 8 a.m. Each of the five .eams was scheduled to give half an hour's performance three times in rotation, on each of the two days. These times were adhered to, the following team ousting a tardy team after half an hour's performance if it showed no signs of moving.

As each team of about fifty people came forward in its turn, the performers were arranged in a common pattern. The front one or two rows had the star dancers who carried sticks and the club flag. They were followed by lines of dancers who also sang and played gourd horns. These formed the greater part of the contingent of young men and, finally, at the back were several rows of boys all with gourd horns and some with tin cymbals—these provided the orchestral background when the front dancers sang. In addition each team had a large native-type drum with their name painted on, carried on poles by two boys, and one or two small drums. In the case of the Liuli team there were two small manufactured drums and one very large army-type drum. These had come from South Africa and were the property of the group and looked after by an older man *The Guardian of the Drum.*

The gourd horns used were of three types which gave a variety in pitch. The long necked deep horn *barugumu*, the full gourd of medium pitch *buyu* and the high pitched open gourd *kata*. Most performers held gourds in their right hand and flourished coloured scarves in their left as they danced and were dressed fairly uniformly.

On all four sides of the dancing pitch there was a large crowd of attentive onlookers for the full two days. The teams were studied closely, some were praised for their dancing (as the Liuli team), some for their singing (as the Chimate team from near the Portuguese border) and others for their band (as the Ndengeli team). The team with the highest standard in all three activities and the best integration between music, song and dance was adjudged the best team. The result was decided by the older men of the forum and through the lack of interest shown as to the winners, it was obvious that the dancing was more important than the competition. In the contest that I saw, it was difficult to find out the winners. I was told that they would be notified by post later by the Mbamba Bay team; general opinion however was in favour of the Mhalo team.

Nearly every village has its women's *boma* or club where they meet to *kihoda* similarly to the men. In their case, however, there is only dancing and singing without gourd accompaniments and the boys beat the drums. The groups visit neighbouring villages as do the men. Groups of married and single women unaccompanied by their menfolk, meet at a pre-arranged dancing ground after a written invitation to their *boma*. Dancing is of the type usual for women in the area—in a circle. Each group has its officials in the same way as the men.

The two-day contest as a whole showed a very high standard of organization and performance by the participating villages. No incidents occurred and the event was extremely popular and well attended by the whole countryside which is very proud of this institution.

A SHORT HISTORY OF THE KLUB DAR-ES-SALÂM

Compiled from German Records By W. Weidmann

The "Klub Dar-es-Salâm", the forerunner of the "Dar es Salaam Club" was founded in 1903. Its first printed rules are dated the first of July 1903 and an original set of rules is still extant. Attempts to form a social club at Dar es Salaam go back to the last years of the nineteenth century, but money was short and nothing substantial was done until Governor Graf (Count) Goetzen, on return from home leave in the first quarter of 1903, brought with him a sum of Marks 25,000 which he had collected in Germany for the purpose of starting a Club. Incidentally, he became the first life patron. The money came mainly from donations made by commercial firms and industrialists bent on the expansion of German interests in their Colonies generally. It is noteworthy that Rule 3 of the Club Rules provided that one of the three members of the Managing Committee must be a "commercial" in order to guarantee one of the main aims of the Club, namely, to do away with what was commonly described as "spirit of caste". Count Goetzen, in his correspondence with the Home Government, stressed this aim as very desirable, though denying the existence of such an evil spirit. The Rules also laid down that ordinary members should be invited to join the Club by a General Meeting. Non-members residing in Dar es Salaam for more than a month were not allowed to be invited to the Club premises. Consuls of foreign powers, officers of warships temporarily in the harbour and missionaries could visit the Club on the invitation of the Chairman without being required to join the Club as ordinary members. The entrance fee amounted to Rp. 10 (Shs. 20/-) and the monthly subscription to Rp. 5 (Shs. 10/-).

The first Managing Committee, that for 1903, consisted of Detlef von Winterfeldt, Provincial Commissioner, Hans Heller, Director of Customs and Fritz Sandleben, merchant.

The most important task of the new Club was, of course, to find a place of its own. That however was difficult with the small resources at its disposal. The obvious thing to do was to approach Government for the grant of a suitable freehold plot at a nominal purchase price. The Governor, as he had shown previously, tried his best but at first without success. The correspondence with the Colonial Office on the subject dragged on and the best he could obtain was a promise, given rather grudgingly, to the effect that "the matter will be favourably considered" if and when the Club, after a year or two, could prove that it served a useful purpose and could stand on its own feet. At the same time the Colonial Office advised the Club to rent a house first and to go slow. It is really quite amusing, fifty years later, to read this correspondence which incidentally was filed on a secret file. The Club did not like what it openly referred to as meanness on the part of the Home Government and got in touch with one of the founder-members, F. C. L. Gurlitt, the Director of the Public Works Department of the day. Gurlitt was the owner of the site on which the present main buildings of the Dar es Salaam Club stand. He had acquired, on 20th December, 1899 the freehold interest in this site (Plot No. 26 of Flur I, Dar es Salaam) from the Imperial Government for Rp. 1,954.50 (Shs. 3,909/-) and undertook to erect,

within eighteen months, a building on the land. One may ask how it came about that a serving civil servant acquired land during the duration of his term of office. The answer is that, in the very early days of the German administration, the Government encouraged civil servants to build their own houses in order to alleviate the unhappy housing position of the day. To enable them to do so, civil servants were required to pay only one-half of the ordinary purchase price for the freehold interest in plots for their own use. Some years later, however, the German Government reversed its housing policy and took advantage of a clause of pre-emption imposed on the purchasers of such plots to acquire all houses built by its civil servants. The reason for such drastic measures was perhaps characteristic: it happened that some enterprising junior officers were living in their own comfortable houses while officers higher up in the hierarchy had to be content with houses or flats less representative of their status, a proposition quite insufferable to them. I may be allowed to interpolate here that the old residence of our Chief Secretary was privately constructed by the then Director of Medical Services, Dr. Simon, but the German Government reacquired the plot, with the building, together with the furniture, etc., when its policy changed.

To continue the story of the Club building, the negotiations with Gurlitt for the acquisition of his plot, together with the building on it, proceeded as slowly as did Count Goetzen's pleadings with the Colonial Office. At last, on 6th November, 1903, a secret code-telegram arrived authorizing the Governor to act as he had proposed. The Governor gave instructions by a letter of 12th November, 1903, written with his own hand, to proceed with the acquisition of Gurlitt's house "as discussed". The arrangement between the Club and Gurlitt took the form of the following transactions, all concluded at the District Court of Dar es Salaam on 14th November, 1903:—

(1) The Landesfiskus of German East Africa, the Government agency in which all public land in the Protectorate was vested, conveyed to the "Klub Dar-es-Salâm" Plots Nos. 25 and 18/24 both of Flur I, Dar es Salaam (east of the present Club premises) for the low purchase price of Rp. 100 (Shs. 200/-) authorized by H.M. the Kaiser in a "Cabinet-Order" countersigned by the Imperial Chancellor of the Reich*.

(2) The Managing Committee of the Club conveyed these two plots (Nos. 25 and 18/24) to F. C. L. Gurlitt for the nominal purchase price of Rp. 1 (Shs. 2/-); and

(3) F. C. L. Gurlitt conveyed to the "Klub Dar-es-Salâm" Plot No. 26 together with the buildings on it for Rp. 32,000 (Shs. 64,000/-).

According to the terms of document (3) above, the Club undertook to pay Rp. 7,000 (Shs. 14,000/-) on or before 31st December, 1903, while the balance, secured by a registered hypotheca (mortgage or charge is the English equivalent) carrying six per cent interest, was payable on three months' notice. To meet the cash payment, having first obtained an extension of time to 1st April, 1904, a General Meeting of the Club invited the members to raise the money among themselves. The response was successful and twenty-one members subscribed between them the sum of Rp. 7,000 in bonds, in units of Rp. 100 each. The loan

*One may find it rather strange that His Majesty had to be troubled with such a trivial matter, but under the law neither the Governor nor the Chancellor of the Reich had authority to part with land vested in the Crown for less than its true value.

carried five per cent interest and was to be paid off from a sinking fund by drawing lots. As a matter of fact, the Club repaid the balance of this loan to its members on 23rd May, 1914, from a loan obtained on the same day. To complete the financial picture of the Club as revealed by the records, the Club owed, at the outbreak of World War I—

	Rp.
(a) to the District Saving Bank, Dar es Salaam	20,000
(b) to the District Saving Bank, Dar es Salaam	6,000
(c) to Mr. Hoffmann	10,000
(d) to Mr. Hoffmann	7,500
	43,500

or Shs. 87,000/-. The whole of this amount was secured by mortgages over the Club premises.

To close on a more cheerful note, and to complete this record I should mention that the Club undertook, on 14th November, 1903, to keep the building on the plot permanently fully insured; and to erect a skittle alley, if it so wished, but only on the western half, or alongside the northern boundary of the property, both conditions to run with the land. Gurlitt insisted on the second condition for a very personal reason. His intention was to build a nice house on the adjoining plot No. 25, and to live there after his retirement unmolested by noisy skittle players. In fact, he constructed a very fine building—it is still more or less unaltered *in situ*—and returned from Hamburg to Dar es Salaam where he remained up to 1909. On his leaving the Protectorate for good, he retained his property, which, at the outbreak of World War I, was vested in the Custodian of Enemy Property. This Government acquired the property under the Retention Ordinance. To set the minds of members of the Club at rest, I must add that, on first registration, the Governor waived these obsolete conditions.

CHINESE PORCELAIN IN TANGANYIKA

By G. S. P. Freeman-Grenville

Most people in Tanganyika, and certainly those who live on the coast, know that in days long gone by there was a considerable import trade in Chinese porcelain in East Africa. There are small collections of it in the Dar es Salaam Museum, in the Beit al-Amani, Zanzibar, in the collection of the late Sir Frederick Jackson in the Uganda Museum, as well as some in private hands. In the past two years my wife and I have assembled a collection of some four hundred shards from more than thirty ancient sites between the Kenya border and the Rufiji. From all these sources it is now beginning to be possible to reconstruct a history of this trade for which we have virtually no written evidence but only that of the pots themselves.

We know that in 1417 and in 1431 Chinese embassies visited Mogadishu and Malindi: but, apart from these occasions, it is concluded by G. F. Hourani, whose "Arab Seafarers in the Indian Ocean" everyone interested in East African history ought to read, that trade between the East Coast and China was entirely conducted through entrepôts, without direct contact. In Duarte Barbosa we read of Indian merchants of Kutch and the Kathiawar coast who brought goods from China to sell to Arabs who came from Siraf in the Persian Gulf and from Oman and who themselves sold to the Arab *nakhoda* or sea-captains who came, as they still do today, in their dhows on the north-east monsoon.

In his recent book on his excavation of the Great Mosque of Gedi in Kenya J. S. Kirkman describes some of the large quantities of Islamic earthenware glazed in yellow with black geometrical designs he has discovered there. The tremendous quantities of this ware, which came from the Middle East, found in the rubbish dumps at Gedi and the absence of local pottery other than kitchenware makes it clear that this was the normal ware in luxury use at any rate during the twelfth and thirteenth centuries. In Tanganyika, where so far no excavations on the scale of Gedi have yet taken place, only two fragments of this ware have been found, one at Tongoni, in Tanga District, and one at Bimbuli, in Pangani District. In the mid-fourteenth century levels this is no longer found at Gedi: it is displaced by a common type of Islamic glazed earthenware with dark and light green, blue, manganese purple and allied glazes. Such glazed pottery has been found at almost every Middle Eastern site. Shards of this, but no complete pots, have been found on numerous sites on the Tanganyika coast. The only complete specimen known to me has been preserved by being cemented onto a tomb at Bweni Dogo, Pangani District.

Although there is evidence for the import of Sung celadon wares, it seems that heavy imports of Chinese wares started quite suddenly about the middle of the fourteenth century. We may perhaps connect this with the decline of many Middle Eastern kilns after the collapse of the Abbasid Caliphate as a result of the Mongol invasions of the thirteenth century. Failing to obtain good class

*Note.—This article was broadcast by Dar es Salaam Radio on 26th February, 1955, and is reproduced by courtesy of the Tanganyika Broadcasting Service. The bibliography has been added by the author for the benefit of members interested in pursuing the subject.—Ed.

Middle Eastern earthenware, the Arab importers turned to India and started to buy Chinese wares in the markets there. Indeed, apart from finds at Gedi, although some doubtful Sung ware has been found at Tongoni, and a single fragment of Ting ware in Zanzibar, we can say that before the mid-fourteenth century there was probably no steady import of Chinese ware.

From then on, there is hardly a single reign of a Chinese Emperor not represented in finds of porcelain on the Tanganyika coast up to the mid-nineteenth century. But, probably because there has been no systematic excavation, examples of the early Ming of the fourteenth and fifteenth centuries are rare: the vast majority of finds belong to the reigns of the Ching Dynasty Emperors K'ang—hsi (1662–1722), Yung Cheng (1723–35) and Chien Lung (1736–95). Again, the mass are of cheap wares intended for common use from provincial kilns of types not to be found among the superior wares in museum collections in Europe and the United States. It is still impossible to state with any precision where a given example was made and to assign it to any precise date. This makes this study of particular interest, for it appears to be breaking new ground in the history of oriental ceramics. The vast majority of examples are what are known as blue-and-white: that is, they have a white or bluish-white glaze, with blue underglaze painting. Examples in other colours are very rare. This is often, quite wrongly, known as Lamu ware, because it was once thought that Lamu was the main centre of import.

Turning to the use of porcelain on the coast, by far the most important was certainly domestic: this is certain from large finds in areas such as Chumbageni beach in Tanga and in the rubbish dumps at Gedi and Mboamaji, Kiserawe District, where there is no question of anything else. A true artistic appreciation of porcelain among the Swahili is witnessed by the late eighteenth or early nineteenth century *utenzi* Al-Inkishafi, a religious poem which draws a moral from the decline of Pate, written in the Lamu dialect:

Wapambaye sini ya kutuewa
na kula kikombe kinakishiwa

Kati watiziye kazi ya kowa,
Katika mapambo yanawiriye.

These lines were freely translated by the late W. Hichens:—

Their banquetings with ware of Ts'in were spread,
each goblet with fine graving overlaid;

And, set in the midst, the crystal pitchers made
bright glitter-glow among the napery lain.

But the use best known, though probably least employed, was in the decoration of public and private buildings and especially of tombs. This custom may have been introduced from India, where, Duarte Barbosa tells us, the people of Reynel, in the kingdom of Guzerat, had shelves of porcelain round the walls of the principal room of the house. Only two mosques in East Africa retain their decoration of porcelain plates round the *mihrab* or prayer-niche: Chwaka in Zanzibar and Mafui, a remote place in Pangani District. The mosque of Mjimwema once displayed a single plate decorating the ablutions. But formerly, before they were torn out for sale to tourists, there were many more examples. It is sad that so many tombs have been robbed. It is possible that this form had

originally an underlying magical purpose, but later the intention seems to have been no more than decorative. This is borne out by the decoration of a small antechamber in the Palace of Songo ya Mnara, near Kilwa Kisiwani, with more than 300 plates inset into cavities in the roof; and again by two lines in Al-Inkishafi from which I have already quoted:

Madaka ya nyumba ya zisahani
sasa walaliye wana wa nyuni.

I again give Hichens's translation:—

Where once in wall-niches the porcelain stood
now wildling birds nestle the fledgling brood.

Far more familiar are the tombs decorated with Chinese porcelain which may be found at almost every historical site. The earliest known of these, which has recently been the subject of a study in *Tanganyika Notes and Records* by Mr. Graham Hunter, is a pillar tomb at Kauli, near Bagamoyo: it was decorated with plates of the Yuan Dynasty, (1272–1368), of which the two last remaining have now been most wisely removed to the safe custody of the King George V Memorial Museum. Of the rest the tomb appears to have been robbed. A very similar tomb was excavated recently at Kilepwa in Kenya, and shown to be *circa* 1350. There are numerous decorated tombs, including pillar tombs, of following centuries but it is unwise to assume that all of these are ancient. Those at Msasani in Dar es Salaam are probably all of the eighteenth and nineteenth centuries. A pillar tomb at Marungu, Tanga District, bears an inscription dated 1857. At Moa, in the same district, there are tombs with inscriptions giving dates between 1916 and 1937 and decorated with cheap modern European wares.

But was the original intention solely decorative? In the Pangani District Book a writer records how at the burial in 1931 of Zumbe Diwani Simba of Mkwaja porcelain plates were ceremoniously broken over his grave. There is a considerable body of evidence of a cult of the dead in which offerings of food and incense are placed in shards of pottery or porcelain at important tombs: at least fifty examples are known to me.

Certainly in the Middle Ages there was a widespread belief in the magical properties of porcelain. The Persian philosopher, at-Tusi, who lived from 1207 to 1274, to give one example, in a work written to instruct the Mongol Emperor Hulagu Khan "in the appreciation of ornaments presented to him" informed him that celadon porcelain had definitely magical properties. If food which had been poisoned were placed in a celadon bowl, the glaze would sweat. Powdered celadon was not only excellent as tooth-paste: it was a specific to stop nose-bleeding.

Literary evidence that a similar belief prevailed in East Africa comes from Mozambique, where, at an unnamed village, the Portuguese pilot Lavanha recorded in 1593: "Coveting a porcelain bottle he saw in the possession of the chief captain, the Chief gave him an ox in exchange, and with great delight seeing it shine and that the glaze would not rub off, he put it to his eyes and to those of his people, and to those parts of the body in which they felt any pain, they persuading themselves it would give them health. And when it was known in the villages that their Chief, who was called Uquine Inhana, had this bottle, they all came to see it, observing the same ceremonies and superstitions."

If evidence is not plentiful, we cannot easily dismiss it. But we cannot surely claim a deliberate magical purpose in more modern times: how then to explain a nineteenth century Staffordshire ware chamber-pot which formerly decorated a tomb at Mbweni, Bagamoyo District, or two wine bottles cemented onto a nineteenth century tomb at Bweni Dogo and which are marked Bordeaux Rouge? Rather perhaps it is a relic of former superstition, like our own against passing wine anti-clockwise, of which the reason and origin are forgotten.

Bibliographical Appendix

The following works were referred to directly in the course of the talk:

George Fadhlo Hourani:—"Arab Seafarers in the Indian Ocean": Princeton University Press, 1952. (Obtainable through Messrs. Basil Blackwell, Broad St., Oxford).

J. S. Kirkman, M.A., F.R.A.S.—"The Arab City of Gedi": "Excavations in the Great Mosque": "Architecture and Finds": Oxford University Press, 1954.

J. S. Kirkman, M.A., F.R.A.S.—"The Excavations at Kilepwa", Antiquaries Journal, Vol. XXXII, July–Oct., 1952, Nos. 3, 4.

W. Hichens.—"Al-Inkishafi", Sheldon Press, 1939.

G. Hunter.—"A note on some tombs at Kaole": *Tanganyika Notes and Records* No. 37, July, 1954.

Lavanha.—Diary, in G. Mc. Theal, "Records of S.E. Africa", 9 vols., Government of Cape Colony, 1898–1902.

The Book of Duarte Barbosa, Hakluyt Society, 1918.

Pangani District Book.

The bibliography of Islamic and of Chinese pottery and porcelain is immense. Reference may be made to the bibliographies in the works already mentioned and also to the bibliographies of the following works which make it unnecessary to summarize those of earlier works:

Transactions of the Oriental Ceramic Society of London.

A. Lane.—"Early Islamic Pottery", 1947.

Basil Gray.—"Early Chinese Pottery and Porcelain", 1953.

Soane Jenyns.—"Chinese Wares of the Ming Dynasty", 1954.

"Later Chinese Porcelain", 1951.

Sir Harry Garnet.—"Ming Blue-and-White", 1954.

Los Angeles County Museum.—"Chinese Ceramics": A Loan Exhibition from Collections in America and Japan, March 14th to April 27th 1952.

The following work, since it discusses the Persian imitations of Chinese wares, finds of which have been common on the Tanganyika coast, is of great value:

R. L. Hobson.—"A Guide to the Islamic Pottery of the Near East", printed by order of the Trustees of the British Museum, 1932.

The two following works, although their dating is not always in accord with more recent views, are indispensable since they contain a very large number of pictorial reproductions:

International Exhibition of Chinese Art.—"Catalogue and Illustrated Supplement", Royal Academy of Arts, 1935–6.

W. B. Honey.—"The Ceramic Art of China and other countries of the Far East" 1945.

THIRD PAN-AFRICAN CONGRESS ON PRE-HISTORY

The Pan-African Pre-History Congress which held its inaugural meeting in Nairobi in 1947, assembled for the third of its four-yearly meetings at Livingstone, Northern Rhodesia, from 22nd to 28th July, 1955. The writer was privileged to be one of eighty delegates representing twenty-six different countries; not only was Africa well covered, but numerous delegates came from North America, Europe and Asia.

The Congress was preceded by a week of excursions in Southern Rhodesia. To the writer the main interest in these lay in the evidence of a past indigenous culture differing considerably from present day African conditions. Zimbabwe, so well publicized that it is visited by 20,000 people every year, is only one, though admittedly the finest, of a series of some 140 ruins scattered throughout the country. Whilst there is evidence of external trade, in the form of beads and pottery, there is no evidence of external influence in the building of the structures which possess neither straight lines, nor rectangular lay out, nor bonded masonry and are now generally accepted as an entirely indigenous cultural manifestation.

The dating of Zimbabwe has recently been taken a step further by the Carbon-14 method. Two pieces of timber were discovered forming the lintel or support of a storm-water drain constructed at the base of one of the inner walls. The positioning of the timber must therefore have been contemporary with the construction of the wall. Pieces of this timber were sent to Chicago and London where different laboratories working independently and using slightly different techniques arrived at results of remarkable consistency, viz. A.D. 591$\pm$ 120 and A.D. 702$\pm$ 92 respectively. As there is no evidence of the re-use of the timber concerned, the date of that particular wall must be accepted as *circa* 700 A.D.

No skeletal remains have been found in conjunction with the Rhodesian ruins, but immediately to the south, at Mapungubwe in the Northern Transvaal a site was discovered which revealed many points of similarity to the Rhodesian Ruin Culture; gold-working, stone construction, and the building up of artificial hut sites on hill tops by the transportation of soil from below. Here at Mapungubwe and at the neighbouring site of Bambadyanalo, skeletal remains have been found which indicate a type held by the physical anthropologists to be far removed from the Bantu, and possibly still existing today as one element in the physical make-up of the Hottentots.

The connection between the Rhodesian discoveries and the history of Tanganyika was revealed at the sessions at Livingstone, where the writer read a paper describing the finding of some skeletons at Naberera in Northern Tanganyika. The burial cairns are in association with wells and rain ponds of a type not constructed by the present day inhabitants. Dr. Galloway, who was responsible for the examination of the Mapungubwe material when in South Africa and who is now Dean of the Faculty of Medicine at Makerere, described the Tanganyika skeletons. These proved to be of two young adults—these came from a single cairn—one male and one female. A third skeleton was unidentifiable, whilst the fourth was of a middle-aged female.

This skull, taken as the type specimen, was long with a cephalic index of 68; it was in good condition, complete with mandible. The two lower incisors had been extracted during life, whilst the upper incisors were filed vertically on the front aspect in a manner not practised by the tribes in the area today. It would of course be rash to assume on our present incomplete evidence that the people who dug the Naberera wells were those who built Zimbabwe; and rasher still to conclude that they practised the same or similar cultures. In fact the evidence supports a directly contrary view, that the Naberera folk were nomadic pastoralists, whilst the Zimbabwe people were settled, and acquired their knowledge of metal working from West Africa. What is certain is that Tanganyika in common with the rest of Africa, in the pre-Colonial days, was not in the changeless primitive state that some writers would have us believe. There is a rich history of ethnic and cultural change to be unravelled when funds and personnel are made available for the purpose.

Other papers concerning Tanganyika were read by Dr. Leakey on "A Living Site of Chelles—Acheul Stage I at Olduwai" and "The Techniques of Copying Rock Paintings", while I contributed a further paper on "Early Iron Age Sites in Tanganyika relative to Traditional History".

A further point of interest to the Tanganyika visitor was a display of a quantity of hand-axes as a temporary exhibit in the Rhodes-Livingstone Museum at Livingstone. These came from a site near Iringa which was discovered by a passing traveller in May, 1951, who removed "two rucksacks full" of stone implements. These, to his credit, he handed to Dr. C. Van Riet Lowe, the Director of South African Archæological Survey, who published details of the find in the South African Archæological Bulletin in December, 1951. Last year the site was re-visited by Dr. Clarke Howell, an anatomist from the United States, who removed an even greater quantity of material of first class importance. He published a report of the site and the finds in the South African Archæological Bulletin, Vol. X, No. 38, June, 1955. It is apparent that this site may well equal if not exceed the famous Olduwai Gorge in archæological interest. There may be a case to justify the collection of a few type specimens from a newly-discovered site, to enable the experts to assess the value of the finds and to decide whether a special visit is justified. There is however no excuse for the removal of surface specimens, other than in conjunction with full survey and excavation, as much evidence is destroyed concerning the possible points of derivation of the surface material, so hampering subsequent excavation. The authorities are however alive to the situation and developments in the matter of more adequate protection for our monuments and relics are confidently expected in the near future.

H. A. F.

NAIRUZI—SOME ADDITIONAL NOTES

By Sir John Gray

The following notes are the result of information received since I wrote my article on *Nairuzi*, which appeared in *Tanganyika Notes and Records*, No. 38, and may be of some interest.

Mr. G. S. P. Freeman-Grenville has drawn my attention to the following passage in Oscar Baumann's *Die Insel Mafia und ihre kleineren Nachbarinseln:*—

> "Approachable at low tide is the small island of Pemba juu (Outer Cape), which is covered with low scrub. The outermost rock is called *Kijibwe mtu*. It is believed to be a woman who was turned into stone, because, despite being forbidden, she went to bathe in the breakers on New Year's Day, and as a punishment was thus transformed with a child on her back. The same story is told of a rock near Pangani, *Mwana Tunguja*."

I venture to suggest that these two women went to bathe in the sea on *Kifunzi*, the day preceding *Siku ya Mwaka* or *Nairuzi*. It would have been very meet, right and their bounden duty to have bathed in the sea on *Nairuzi*. Their sin, however, was like that of the three fishermen of Mombasa, who met with the same fate as they did when they went a-fishing on *Kifunzi* (see *Tanganyika Notes and Records*, No. 38, p. 9).

Mr. Graham Hunter has very kindly supplied me with the following notes as to the celebration of *Nairuzi* at Kwale Island to the north of Tanga and Kwale Island opposite to Kisiju.

"At Kwale, north of Tanga, where the inhabitants claim to be Shirazi, I asked about *siku ya mwaka*. The village Jumbe and several elders told me that this day was still observed and that this year it had fallen on August 3rd. On the morning of the day the men, women and children go down to the sea to bathe, each in a separate place. The Koran is not read. At 8 a.m. the big drums are beaten and there is a short dance. The children then collect their 'slates' and draw on them pictures of flowers or anything that comes into their minds, which they then carry round the village from house to house showing them to the people. For their trouble they are rewarded with food or a few cents.

After the 8 a.m. dance, the women return to their houses and then men assemble together near the beach and kill an ox or a goat. The meat is cut up and each man takes a piece and carries it in procession around the perimeter of the village. They return to the open space and while waiting for the meat to cook, read passages from the Koran.

At 4 p.m. the big drums are beaten again and there is a dance. The men dance waving their swords (the few swords that are left).

As you see from the above account the Koran is only read during the cooking interval. Apparently the children show their slates mainly to the women, as the men are preparing to leave for the sacrifice of the ox.

On Kwale Island near Kisiju.

The inhabitants claim to be Shirazi. An Arab there said that he called the day *Nairuz*, but that the Swahili and Shirazi called it *siku ya mwaka*.

In the morning the men, women and children proceed separately on their ways down to bathe in the sea. They each chant passages from the Koran on their way down.

The children return to the village and play and the women return to their houses and read the Koran. The men go to the mosque, form a procession and, leading a sacrificial goat, walk round the island chanting passages from the Koran. On return they kill the goat near the mosque, cook it and eat it together with bread.

Apparently no dances are held and there are no other special observances.

The Jumbe at Kwale (Tanga) told me that the people of Moa, who are Segeju, also bathe in the sea on *siku ya mwaka*."

In *Tanganyika Notes and Records*, No. 38 p. 21, I cited in a footnote Dr. Werth—*Das Deutsch Ostafrikanische Kustenland* p. 299 as an authority for the statement that on the Tanganyika mainland at *Nairuzi* "the children go about singing with blackened boards inscribed with chalk". Incidentally, a misleading *lapsus calami* on my part had led to the omission of the word "no" from the ensuing sentence reading "He supplies us with further details". Mr. Hunter's information that on the southern Kwale Island the children "draw pictures of flowers or anything that comes into their minds" supplies a most interesting detail. It calls to mind the garlands which children used to carry about in the United Kingdom on May Day. William Hone's *Table Book*, *Year Book* and *Every Day Books* describe these customs with a wealth of detail. So does the first volume of John Brand's *Popular Antiquities*. Sir James Frazer also describes more of them in chapter X of the second volume of *The Magic Art* as well as similar customs in other European countries. He expresses the opinion that "the intention of these customs is to bring home to the village, and to each house, the blessings which the tree spirit has it in his power to bestow". This intention serves also to explain the origin of the former practice which I have described in *Tanganyika Notes and Records*, No. 38, pp. 11, 12 of women parading the streets of Zanzibar garlanded on *Nairuzi* and hanging up those garlands outside their houses when the *mchezo wa mzoga* was finished.

The practice of sending evil spirits to sea at *Nairuzi* is apparently still in vogue in Pemba. Canon Sir John Key, who founded the U.M.C.A. station at Wete in that island in 1897, has put on record that the Pemba, or indigenous inhabitants of the island, have yearly "a great dance and procession in August to turn out the foreign spirits, which are caught in bags and sent off from the island in a little fleet of toy boats."

At Ndagoni on the west coast of the island I am told that the expulsion of these spirits used to be effected by means of a dance which was performed waist deep in the sea. All the evil spirits from the neighbourhood (including those from Vitongoji on the east shore of the island) were collected and carried into the water and thus expelled whilst the dance was being performed. My informant was unable to say precisely how the spirits were dispersed. As a mere conjecture, I suggest that the dancers made them sail out to sea.

After the dance the performers returned to the shore and performed a dance called *Kiumbizi*. The performers danced in opposing ranks with sticks. Periodically a champion would step out from each rank and the two would indulge in cudgel-play. When one had had perforce to acknowledge defeat, another would take his place. It was said that a really good cudgel-player had been known to knock out five or six opponents with his cudgel. If a man was killed during these fights, nobody used to be punished for the act. On the contrary, the victor would receive a reward for his prowess.

At Vitongoji and Ndagoni the *watu wazima* (elders) used formerly to announce that at the time of *siku ya mwaka* a certain person "would become lost". He might be a child or an adult, a local man or a stranger. On the day following *siku ya mwaka*, which was known as the *mwaka mfu* (the dead man's year) it would be found that the person named had in fact disappeared, though nobody would profess to know how he had disappeared. I have, however, been assured that no such mysterious disappearance has occurred since the advent of the British. Evidently, this lost person used formerly to be a scapegoat for the sins committed by the community in the past year.

At Vitongoji the schoolboys still take the wooden boards, which serve them as slates at their Koran school, down to the seashore on *siku ya mwaka*. They go there in procession singing and enter the water, where they wash the boards. After that they return to the shore and play. Sometimes they indulge in fights, but nobody is punished if he hurts a schoolfellow. If the fighting becomes really serious, the Koran teacher intervenes. These proceedings would appear to be intended as reconciliation of a pre-Islamic custom with the precepts of Islam.

The German explorer, Baron von der Decken, was at Mombasa at the time of *Nairuzi* in 1861 and went to see the dances performed outside the town in celebration of the day. In one of those dances the male and female performers exchanged dresses. Von der Decken commented upon this rather unusual feature and stated that "we had never seen such mummery in Zanzibar"(1). Sir Claude Hollis tells us that such a practice existed amongst the Masai, Nandi and Kikuyu and formed part of the rites of circumcision. Archdeacon Farler described it as forming part of the marriage customs in Usambara(2). As Sir James Frazer says, "the religious or superstitious interchange of dress between men and women is an obscure and complex problem, and it is unlikely that any solution would apply in all cases. Probably the custom has been practised from many different motives, . . . among which the principle would seem to be the wish to please certain powerful spirits or to deceive others"(3).

Though von der Decken describes the dance as having been performed by Swahili, it may have been performed by the members of a tribe living in the interior of the continent. If, as seems not unlikely, it formed part of a circumcision ceremony, it is probable that it was only performed at intervals of three or four years when the time came to perform the rites on a new "age set" of youths of the particular tribe and that its performance on this occasion happened to coincide with the *Nairuzi* celebrations. It has been suggested that the rite of circumcision was originally intended to ensure reincarnation at some future time and to provide a stock of energy on which to draw when the critical moment of such reincarnation came round(4). The *Shandwa* dance, which

was performed in Zanzibar at Makunduchi on *Nairuzi* (*Tanganyika Notes and Records*, No. 38, p. 18) has been similarly described as enabling the performers to build up a fresh reserve of energy to combat the evils of the coming year. It may therefore well be that it was deemed appropriate that the dance witnessed by von der Decken, which was the climax of the rites of circumcision, should synchronize with the regeneratory festival of *Nairuzi*.

Von der Decken's information goes to show that the *Nairuzi* celebrations were far from adhering rigidly to a single pattern and that there were a number of local dances introduced as the result of some tribal or local custom.

(1) Kersten—*Baron Carl Clause von der Decken's Reisen* ii. 6.
(2) Frazer—*Adonis—Attis—Osiris* ii. 262, 263: Huntingford—*The Southern Nilo-Hamites* pp. 30, 115.
(3) Frazer—*op. cit.* ii. 264.
(4) Frazer—*Magic Art.* i. 96.

Correspondence

DAR ES SALAAM

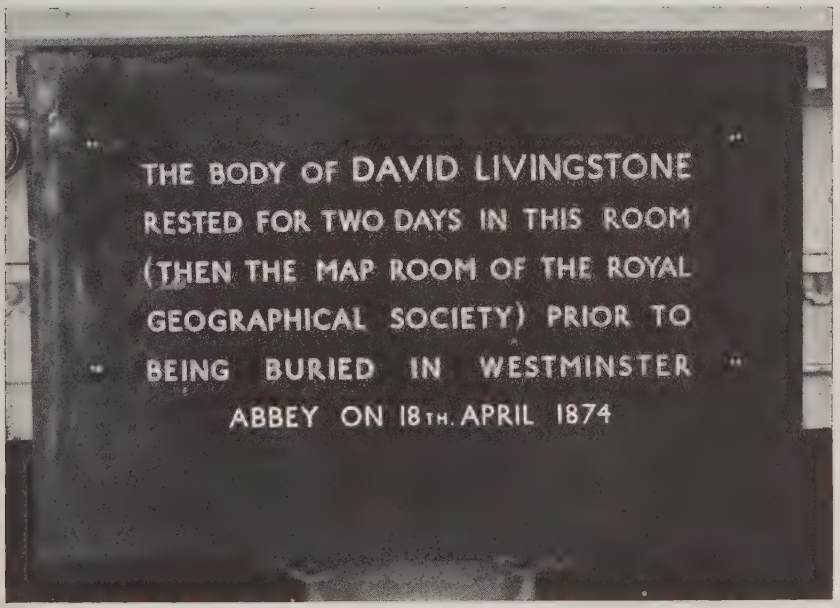
DAVID LIVINGSTONE

Dear Sir,

London is an extraordinary place and you never know what you are not going to find next in some out-of-the-way nook or corner. Last July I was visiting my tailors and idly looking around and found, just above my head, a plaque inscribed:—

"The body of David Livingstone rested for two days in this room (then the map room of the Royal Geographical Society) prior to being buried in Westminster Abbey on 18th April, 1874".

The present occupants of the premises, Messrs. Hawkes & Company, 1 Savile Row, were good enough to have the plaque photographed and I thought it might be of interest to have it placed on record.


THE BODY OF DAVID LIVINGSTONE
RESTED FOR TWO DAYS IN THIS ROOM
(THEN THE MAP ROOM OF THE ROYAL
GEOGRAPHICAL SOCIETY) PRIOR TO
BEING BURIED IN WESTMINSTER
ABBEY ON 18TH. APRIL 1874

Yours truly,

E. F. T.

C/o The Secretariat,
Dar es Salaam

NAIRUZI

Dear Sir,

Sir John Gray's most interesting article on *Nairuzi* or *Siku ya Mwaka* in *Tanganyika Notes and Records* No. 38 brought back to me recollections of my first tour (1931–34) in Pemba, where the celebration of this occasion was an important annual event. I made some notes on the subject when I was there but I am afraid they have long since disappeared without being written up. I do, however, remember one or two details which receive no mention in Sir John Gray's article. First, during the week before the *Siku ya Mwaka* when evil spirits are abroad it was considered advisable to carry a lime or a piece of charcoal as a protection against them, particularly at night. Secondly, it was the custom to mark dwelling huts with a horizontal row of greyish-white spots, about knee-high, also as a protection against evil spirits. I do not clearly remember what pigment was used to make these marks but it seems probable from the information in Sir John's article that the ashes of the previous year's fire were used.

Lest it should be imagined from the opening paragraph of Sir John's article that the celebration of *Siku ya Mwaka* has died out in the Tanganyika mainland, I would record that near Selander Bridge, Dar es Salaam, at about 7.30 a.m., during the first week of August, 1955, I saw a band of about twenty African women decked with the customary green leaves who were obviously just returning from their annual dip.

Some mistakes in Swahili seem to have crept into the text on page 2 of Sir John's article; for example, surely "*thalathmia na mosi sabiini*" should be "*mosi thelathamia na sabaini*" and "*mia miteni*" simply "*miteen*"?

Yours faithfully,
W. Wenban-Smith

Arusha

OL DONYO L'ENGAI

Sir,

Dr. N. J. Guest of the Geological Survey introduced his article "Climbing Ol Donyo L'Engai" in *Tanganyika Notes and Records* No. 31 with a list of known and rumoured eruptions of this, our one active volcano in Tanganyika.

This list starts in 1880 with the "possible 'eruption with a thunderlike noise and thick smoke'", whilst in 1882–3 "Fischer saw smoke escaping from the summit and the natives who accompanied him spoke of stretches of fire on the flanks and rumbling noises inside the mountain."

Recently when pursuing research in Cambridge University Library, I had an opportunity of consulting the report of Dr. Fischer's talk to the Hamburg Geographical Society at a meeting held on December 6th, 1883. This record appears in *The Proceedings of the Royal Geographical Society*, Volume VI, pages 76–83. I quote from page 81 ". . . the road led in the direction of Nguraman: (this is an agricultural settlement at the north end of Lake Natron, lying to the west of Lake Magadi and immediately north of the Kenya–Tanganyika boundary, H.A.F.) from the latter country, however, a different route from that taken on the outward journey was followed. The caravan proceeded in a south-westerly direction to the volcano Doenyo Ngai "God's Mountain". The first

interesting district reached was the Soda Swamp, which, proceeding at a distance of a day's journey from Nguraman, stretches along the mountain range to the volcano for a distance of fifty English miles. The shallow water of the swamp, which was inhabited by numerous flamingos and pelicans, showed in different places the temperature 33° centigrade and flows from the foot of the mountain range in a great number of small springs which contain soda and are more or less warm. In the vicinity of the volcano, where the country again rises above 300 feet, the ground was extraordinarily dry, almost treeless, and the grass very parched. The mountain range is here sloping and much rent; huge blocks of stone lie on the plains, which have probably been hurled down there by volcanic agency. The traveller himself saw some smoke issuing from the volcano; *he heard from a Mahammedan that in December 1880, when the latter was camped with a caravan on the south-west of the volcano a violent earthquake took place accompanied by a discharge of burning masses from the crater of the volcano.* (My italics). In Zanzibar also a slight shock was observed during this very month.

Still continuing in a south-westerly direction, the caravan arrived at the plain of Ngaruka to which the ground slopes abruptly and which is shut in by mountains."

This quotation amplifies the first two occurrences noted by Dr. Guest: I was lucky enough, however, to come across a reference which predates all previous records. It was by the Reverend J. P. Farler of the University's Mission, who contributed a note "The Usambara Country of East Africa" to *the Proceedings of the Royal Geographical Society*, Volume I, New Series, pages 81–97. Here on page 93, one reads "The Masai in the neighbourhood of Chaga have adopted many of the habits of agricultural people, they dwell in permanent villages, cultivate Indian Corn, and live on friendly terms with the Wachaga. They understand working in iron, and make their own weapons.

They do not use bows and arrows, and they have no guns. They are a very hardy race and strict monogamists; but so treacherous in their dealings with strangers, that the traders always find it necessary to construct entrenched camps to live in. Last year, 2,000 well-armed Swahilis from Pangani, Tanga and Sadani, set out for the Masai country to make war on a Masai tribe, who are reported to build their houses and stockades with ivory, and refuse all intercourse with strangers or traders. Very few Swahilis ever returned to tell the tale of their defeat. *The great mountain called Doenyo Ngai, west of Chaga, is said to have a bright light over it at night, and that it thunders.* (My italics). The Masai call it Doenyo Ngai, which means "The mountain of God". At its base are two boiling wells, where the traders can cook their meat by putting it into the water on their ramrods. It is possible that this is a sulphur cone."

Farler himself had not visited the country but gleaned his information from Swahili traders. I have quoted at length to show that the information which these Swahilis supplied was not always accurate: it is obvious, however, they had seen an eruption of Ol Donyo L'Engai sometime prior to the recording of the information which, in turn, was prior to the 29th November, 1878, the date on which the Reverend Farler addressed the Royal Geographical Society.

Yours, etc.,

H. A. Fosbrooke

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EDITORIAL NOTES

We wish to apologise to our readers for the inordinate delay in producing this number of the journal.

We very much regret to record the death, since going to press, of Mr. Jack Spalding, one of the contributors to this issue.

Mr. G. W. Hatchell has asked us to express his regrets for omitting, inadvertently, to acknowledge the use made of Professor Smith's work when compiling his article on "Sea-Fishing on the Tanganyika Coast" which appeared in No. 37 of *Tanganyika Notes and Records*.

May we draw the attention of readers to a letter from Chief Thomas Marealle which appears in the correspondence pages of this issue? It is hoped that when the history of the Chagga has been written, it will be possible to publish extracts from it in this journal.

A HISTORY OF LAKE RUKWA AND THE RED LOCUST

By D. L. Gunn

Director, International Red Locust Control Service, P.O. Box 37, Abercorn, N. Rhodesia

INTRODUCTION

The Rukwa Valley is part of the African rift valley system and lies in south-west Tanganyika, roughly parallel to Lake Tanganyika and some 50 miles from it across the Ufipa Plateau. For about 170 miles along the valley the south-western Ufipa Escarpment towers 2,000 feet and more above the level valley floor, which is itself 2,600 feet above sea level; the north-eastern Konongo Escarpment 30 miles away across the valley is well marked, but generally not more than a few hundred feet high.

Within this slot-like valley lies Lake Rukwa. Between the tree line and the edge of open water, there are extensive grass plains in which there are always red locusts (*Nomadacris septemfasciata* Serville). In some years, the locusts are too few to be easily found but in others there are huge numbers of them. In years of abundance, swarms are formed which emigrate and may start a widespread plague. In fact, the Rukwa Valley is one of two areas which are certainly outbreak areas of the red locust. There is a third—the Malagarasi Basin—which may be an outbreak area or may be of secondary importance, a place where swarms from the Rukwa multiply. It is the business of the International Red Locust Control Service to control the locusts in these outbreak areas, and thus to prevent the exodus of swarms which could start a plague of the red locust.

Water drains into Lake Rukwa from an area of about 40,000 square miles (Gunn, 1952) and there is no outlet; water loss is entirely by evaporation. It is not therefore surprising that the lake is salty (Ricardo, 1938). Moreover, mainly because of the large variations in rainfall over the catchment area, the quantity of water in the lake fluctuates very widely, not only within one year but also over long periods. This is a general feature of lakes in East and Central Africa. Even the great lakes that flow out by large rivers, Nyasa, Tanganyika, and Victoria, have annual fluctuations of up to 6 feet and the maximum level varies by about 5 feet in Lake Victoria, over 8 feet in Lake Tanganyika, and 18 feet in Lake Nyasa (Dixey, 1953).

Lake Rukwa is shallow, the maximum depth recorded in the south lake in 1936 being 11 feet (Ricardo, 1938), though G. R. Savory had reported for 1934 one sounding of 28 feet (Swynnerton, 1946) and Swynnerton himself recorded 14 feet in January and 9 feet in November 1946 (Swynnerton, 1946). The general depth of the more extensive northern part of the lake was 6–9 feet in October 1936 (Ricardo, 1938). Swynnerton (1946) estimated the rate of evaporation in 1946 at 5 inches per month or 4 million tons per day. In most places, there is no sharply marked edge or bank and the ground slopes exceedingly gently; consequently changes in depth of water produce very great changes in the extent of the water and corresponding but inverse changes in the extent of the grass plains. Since it is in

these plains that the red locusts live and breed, the area available to the locusts varies greatly. While there are many factors that affect the numbers of the locusts, the extent of the area in which they live is surely one of them. Consequently it is worth while looking for a correlation between lake levels and locust populations.

The difficulty is that only scraps of information are available. Because of the absence of any permanent shore line, especially in the north lake, it is not possible to measure such widely varying levels on a simple post. Even since 1941, when the Service began to operate, there are no systematic measurements of lake levels and only general indications of locust population levels. This article summarizes the information so far assembled and I hope that it will call forth other fragments which may help to complete the picture.

There is some awkwardness about the limits of the year in these matters; the calendar year is generally unsuitable because the natural break occurs at the end of the dry season, which is not at the end of the calendar year. Shortly after the rains begin, usually early in November, the locusts begin mating and, a week or two later, laying their eggs in the ground. The first hatchings generally occur in December and the first adults in February. One has therefore to speak of, e.g., the 1944–45 rains, the breeding season being similarly specified, and the 1945 dry season. Some writers do not do this, but refer to the 1945 rains and breeding; this has usually been found to mean the rains and breeding which produce their largest effects at the beginning of the year named. Confusion regarding years can also arise because the administrative year has at various times begun in January, April, and July, so that great care is needed in quoting from Annual Reports if mistakes of a year are to be avoided. When referring either to lake levels or to locusts, it is usually necessary to mention the month as well; Swynnerton (1946) has shown that the open water surface can fall by 5 feet in one dry season (January–November, 1946), which may reduce its area by scores or hundreds of square miles, while there are never any locust swarms in January, because most of the old adults have then died and the new generation has not begun to show its wings.

LAKE RUKWA IN 1947 AND 1950

In July 1947 for the north-western shore and May and June 1950 for the remainder, aerial photographs of the region were taken and the Directorate of Colonial Surveys has made maps from them on a scale of 1 in 50,000. These record the extent of the lake at those times. Unfortunately it is not always easy to interpret such photographs. For example, it is only too well known to members of the Red Locust Service that, when the lake is fairly high, one may have to walk hundreds of yards or even miles through grass in water, before reaching open water. The true edge of the continuous water surface is concealed in the photographs in luxuriant swamp. Similarly, when the lake is low, it may be necessary to traverse miles of soft mud, impassable to vehicles, before reaching open water or even knowing if there is any. Then only aerial photographs or reconnaissance can in practice determine the extent of open water. Even so, it is usually difficult to see where grass ends and bare mud begins. Nevertheless, the maps from aerial photographs are, in spite of some disadvantages, the most accurate ever made to show the lake.

FIG. I

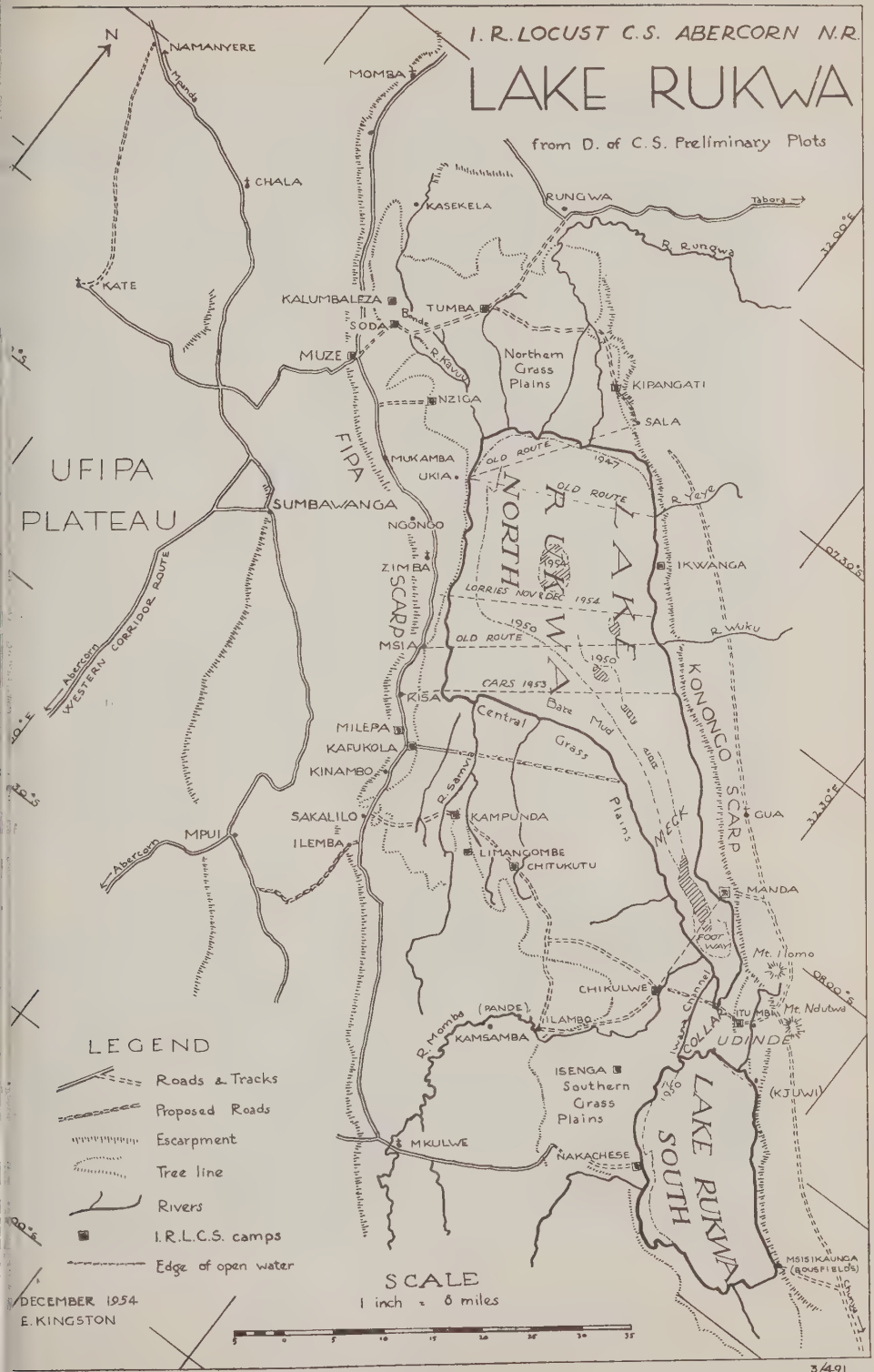
I. R. LOCUST C.S. ABERCORN N.R.
LAKE RUKWA
from D. of C.S. Preliminary Plots
N
NAMANYERE
Mpanda
MOMBA
CHALA
KASEKELA
RUNGWA
Tabora
R. Rungwa
KATE
KALUMBALEZA
TUMBA
SODA
Bende
MUZE
R. Kavuu
Northern Grass Plains
KIPANGATI
NZIGA
SALA
FIPA
MUKAMBA
UKIA
OLD ROUTE
1947
UFIPA PLATEAU
SUMBAWANGA
NGONGO
NORTH RUKWA
R. Yeye
ZIMBA
SCARP
IKWANGA
LORRIES NOV & DEC 1954
1954
1950
R. Wuku
MSIA
OLD ROUTE
1950
CARS 1953
KISA
Bare Mud
Central Grass Plains
KONONGO SCARP
MILEPA
KAFUKOLA
KINAMBO
R. Samvia
SAKALILO
KAMPUNDA
GUA
MPUI
ILEMBA
LIMANGOMBE
CHITUKUTU
MECK
MANDA
FOOT WAY
Mt. Ilomo
CHIKULWE
Wara Channel
(PANDE)
ILAMBO
TUMBI
Mt. Ndutwa
R. Momba
KAMSAMBA
COLLAR
UDINDE
ISENGA
Southern Grass Plains
(KJUWI)
LAKE RUKWA SOUTH
MKULWE
NAKACHESE
MSISIKAUNGA (BOUSFIELD'S)
Abercorn
WESTERN CORRIDOR ROUTE
LEGEND
Roads & Tracks
Proposed Roads
Escarpment
Tree line
Rivers
I.R.L.C.S. camps
Edge of open water
SCALE
1 inch = 8 miles
DECEMBER 1954
E. KINGSTON
3/491

Figure 1 is a reduced copy of the relevant maps, showing also the places mentioned in the text. Villages are moved from time to time and spellings of names vary, but the figure will serve the purpose.

The Colonial Survey Preliminary Plot Maps are highly reliable and detailed for the area that they cover, but they do not yet cover the north-eastern shore of the lake, nor its southern end. Generally speaking, the valley is a little deeper near that shore, with the result that the grass plains are much narrower there and locust populations are generally insignificant. Consequently little attention has previously been paid to that shore. But with the drying out of the north lake in the past few years, the grass has extended miles into what was previously lake-bed and a serious locust infestation extended 25 miles along the coast in 1954. This involved the Service in extra work in a region that had not been mapped for half a century, that had no roads and no villages, and that was largely unknown.

Maps were made by the early explorers and their principal features were form-lines of hills, named rivers, and named villages. But about 25 years ago, because of sleeping sickness, Dr. MacLean concentrated nearly all the small villages into the two big groups at Rungwa and Udinde, leaving only Manda and Sala in the 80 miles between. Consequently the village landmarks are gone and there is nobody to tell the names of the rivers in the valley. On the plateau, there is a good road from Chunya through the Lupa Goldfield area to Saza Mine, with connections to Bousfield's on the lake shore, to Udinde (Uleia, Isosha, Itumbi and Iteka villages) and on to Gua. From Gua a track runs parallel to the valley; this was made solely for getting timber and its many branches end blindly, one of them only about 6 miles from Sala. I once drove by car the whole day from Gua along these tracks without meeting a single human being and had eventually to sleep in the forest. The high frequency of tsetse fly was a sufficient explanation of the lack of inhabitants or travellers.

Because the old maps show features of the Konongo escarpment area which are inaccurate and now difficult to identify and because the new Colonial Survey maps do not cover the area, Fig. 1 does not show many features there and is not reliable for Konongo. The old tracks across the northern end of the lake are also difficult to place reliably.

HISTORICAL INFORMATION ABOUT LAKE RUKWA

The earliest reference to the Rukwa Valley is found in Livingstone's last journals (Waller, 1874). From this and from modern knowledge of the locality, it is clear that Livingstone's body was carried across the valley on the journey from Northern Rhodesia to the Tanganyika coast. From Lambalamfipa "looking down on the plain . . . a vast lake appears . . . but on descending this resolves itself into a glittering plain, for the most part covered with saline incrustations. The path lay directly across this" (Vol. 2, Chapter 13, 1st Ed., p. 335).* Reference is also made to the Likwa River, breast high with brackish water, and to a salt-water lake on the right (south). That is to say, the crossing was made to the north or north-west of the north lake, which was evidently low, as indicated by the salt that was collected. On the other hand, it was not an extremely dry period like 1954, for there was breast-deep water in one river, probably the Rungwa, in the plains close to the lake, for it was salty. This was in September or October, 1873.

*From the account by Livingstone's servants, Susi and Chuma, who escorted the explorer's remains to the coast.—Ed

The first European to see Lake Rukwa was Joseph Thomson (1880, 1881) who walked from Makapufi near the present District Office at Sumbawanga and looked down on the northern part from the Ufipa Escarpment on 27th April 1880, probably near Ngongo; but he did not descend. It seemed to him that he could throw a stone into the lake, for it seemed close to the escarpment. There is no place where he could in fact have done so, for the escarpment itself is by no means sheer, but evidently there was enough water in the northern part of the lake for us to presume that it was at or above average level.

On 5th October 1882, Dr. Emil Kaiser (1883) reached the lake shore some 500 metres east of the village of Ukia; he died there two weeks later. He recorded that the water level was unusually high, for a tree stump was sticking up out of the water. In November 1889, Sir Harry Johnston and Dr. D. Kerr Cross approached the southern end of the lake and reported that the area had had no rain for two years (Johnston, 1890). Cross went on to the water's edge and thought its area had been much reduced from previous years (Cross, 1891). He stated that no "intelligent visitor" had seen the lake between 1882 and 1889. The famous von Wissmann, later Governor of the territory, crossed the southern part of the valley in July 1893 but commented only on locusts, lions, and the general dryness, not on water levels (v. Wissmann, 1893). Nutt (1896) entered the valley from the west, probably by the Ilemba route or thereabouts, and turned south in mid-1894. He, too, mentions that the people were in want because of locusts and he describes the lake, saying that it ended northwards at Mt. Mbutwe. If this is the same as Ndutwa, which is a landmark east of the collar, the implication is that there was at that time no northern lake.

Early in 1897 (January–February), Langheld (1897) visited Ukia and carved Kaiser's name on the baobab tree beneath which he was buried; he reports the natives as saying that the lake began to go back some six years previously. Although he could see no water, with glasses he could make out large flocks of birds, so there must have been some water within a few miles; that would not be unexpected in mid-rains.

Sir Lawrence Wallace went right round the lake in August 1897 (Wallace, 1898; Boileau and Wallace, 1899). He crossed the bare lake-bed from the north-eastern escarpment to Ukia, so the water level must have been low, at least; but he was told that there had been much less water three years previously and he discussed Nutt's visit to give the same conclusion. He went ankle deep in the swamp water of the north lake at Puani, some 40 miles north-west of Chiubi (Kjuwi), but saw no open water there or anywhere except in the south lake. Ramsay (1898) was at Ukia too in November 1897 and described a *chikulwe*, the great cloud of salty dust that blows off the lake-bed when it is extensively dry. That ends the period of preliminary exploration.

According to Ramsay (1898) and Schnee (1920) the water level fell progressively from 1883 until about 1890, but from Cross's statement it appears that this was based on interpolation between the scanty records or upon evidence later collected from the local people. According to Meyer (1909), who quotes Ramsay, the north lake extended again from the middle nineties until, by 1899, it was 80 Km. (50 miles) long. But there appears to be no solid evidence of any great extension by the end of 1897.

After this and in the late nineties, several scientists visited the valley; Dantz, a surveyor or geologist; Goetze, a botanist; von Prittwitz, a geographer; Fülleborn, who collected fish, in December 1899; and Glauning, who was measuring the force of gravity at Kamsamba on the Momba River, in July 1899. One or other of these men walked straight across the lake-bed from Msia, showing it to have been very dry, from Pande on the River Momba to Manda across the neck of the lake by a route which is still used when there is not much water, and from Pande to Udinde (Sprigade, 1904). This last route did not go straight across the Collar, but northwards and then eastwards, so that it missed the very rough ground of the Collar and remained on the plains or on old lake-bed. Dantz (1903) went by the customary route to Manda, but started from Ssenga (Isenga?), "on the Momba River". This was after the rains had started on 22nd November 1899 and he called the plain a low grass steppe, not a lake or even a swamp. Von Prittwitz visited Kjuwi (at the north-east corner of the south lake) in October 1899 and at exactly the same day of the same month in 1901 and he recorded that the water was 2–3 metres higher on the second visit (Sprigade, 1904). By 1904, the water at Ukia was as high as when Kaiser died there in 1882 (Meyer, 1909). Sprigade's map (1904) shows these traverses of the bed of the north lake and also shows the Momba River as flowing into the south lake.

By 1904, investigation of the area seems to have ceased and in that year was published the German map (Sprigade, 1904) which has been used for all subsequent maps until the appearance of the modern D.C.S. products. The older maps were based on the observations of the travellers mentioned above, which were summarized by Langhans (1899). The north lake thus appears as "dry bed of former lake" or "old lake bottom; under water again since 1904 as far as Ukia". These maps generally show the "road" from Bismarckburg (now Kasanga) passing via Sumbawanga, Ngongo, and Ukia, then straight across the valley, and on to Kilimatinde; this crosses a part which has since been open water and it seems likely that before such a route would be established, not only would the lake level be low but it would have been low for some time. It is therefore fairly clear that there was a prolonged dry period from about 1889 to about 1900, followed by rising water up to 1904 or so.

British civil administration of the area began about 1921. For the period from 1904 to 1936, no published observations on lake levels have been discovered. The annual reports of the German districts are not in the official archives at Dar es Salaam and cannot be found; the annual reports of Ufipa District since 1921 do not mention lake levels until 1937. This is a very serious gap, for it was in 1930 that the last locust plague began, partly from the Rukwa Valley.

Some local information has been collected from a locust scout, Mateo Katandula at Milepa, who was probably born about 1887. He says that the north lake was very high about 1905 and very much higher in 1937; it then reached the trees near Milepa, even flooding the Kapalala plain between Milepa and Kafukola. It did not go down much until 1942 (Albrecht, 1952). He thinks the lake was dry about 1920 and 1949. The annual reports of the District Commissioner, Sumbawanga, state that in 1937 the lake was 12 feet above its 1935 level and was still very high in 1938. In these two years, Lake Nyasa and Lake Tanganyika were also abnormally high and it was a period of maximum numbers of sunspots (Dixey, 1953).

Mateo's memory has thus been confirmed for about 1905 (in which the water may have actually been higher than in 1904) and 1937, while 1949 is well remembered by many of us. He may therefore be right about the dryness of 1920. The White Fathers at Zimba recorded an exceptionally severe drought in Rukwa in the wet season 1919–20; Lea and Webb (1939) quote a White Father (Bigot) as stating in 1936 that the north lake was quite dry in 1920 (p. 73).

Monson (1936), a journalist who walked from the Cape to Cairo, was turned aside at Sumbawanga because of the sleeping sickness further north; he went down the escarpment and south-eastwards across the Momba River to Mbeya in mid-March 1929. He did not report directly on the lake level but said the region was drought stricken and that the rains which had been due in October "had not fallen". The account is perhaps somewhat dramatized. He also says that "the natives had been without food, save fish from Lake Rukwa, for several months". The local people are in fact improvident and are often short of food before the new harvest is gathered. Swynnerton (1946) quotes the White Fathers at Zimba Mission as saying "the north lake filled up again during the heavy 1929/30 rains. At this time the north and south lakes were separated by a long bar of dry land, but by 1935 their waters had joined again". This suggests that the north lake was empty or low in 1929 and tends to confirm Monson, but the year has not been mentioned as exceptional by Mateo.

A. P. G. Michelmore first entered the valley with Victor Harris in November 1933 and saw from above Ngongo "a great stretch of open water instead of a swampy old lake bottom" which the maps had led him to expect (Michelmore, 1937). Thus at the end of the dry season, there was no great expanse of grass or dried mud between the trees and the water, so the north lake must have been fairly full. Michelmore also quotes local statements that the lake was deep in April 1934.

As far as it goes, therefore, the evidence seems to show that the lake was dry in 1920, at a low level by 1929 and filling up in early 1930, but not to the very high level of 1937. By the end of 1933 when Michelmore saw the lake, it was fairly high, and it also seems to have been deep in 1934. In 1935 it was deeper still, especially over the Collar, and, though it went down somewhat in 1936 (Swynnerton, 1946), in 1937 it rose to unprecedented heights. There is no evidence of prolonged low levels in the decade after 1930, but quite the reverse; but the more interesting period is before 1930 when no contemporary records were kept. It would be specially valuable to receive reliable information about the period up to 1933.

In 1936, the late Major R. A. Bousfield dug and dynamited a passage from the southern to the northern lake. This channel was later enlarged by the natural flow of water (Swynnerton, 1946) and may be what is now called the Iwana Channel. Bousfield used this route to go by motor boat from his house at Msisikaunga, near the south-east corner of the southern lake, to Zimba; he took Miss Ricardo there in 1936 (Ricardo, 1938). In June 1940 he wrote to the District Commissioner, Sumbawanga, that "the depth of water now left in the junction of the two lakes is only about 24 inches;" he ceased to use the route much at that time.

The decade beginning in 1940 was broadly one of increasing dryness, though not uninterruptedly so. The water began to recede from Milepa in 1942 (Mateo) and by October 1944 the plains had extended considerably (Michelmore. filed

report). In late 1944, the south lake was low; the Bousfield family tell me it ranks only after 1949 and 1954 for low level. Nevertheless Mr. Roy Forrester tells me that in late February 1945 a locust officer, Mr. B. W. Christowitz, went by Major Bousfield's boat from the south lake to Ukia; but no boats did the journey after that year because of continual bumping on the bottom. In late 1945, the Bonde ya Kavuu was dry and a motor track from Kalumbaleza was used to cross the valley. The Bonde ya Kavuu is a great bowl, into which the Kavuu River empties and from which the same river then has a channel to the lake; it may thus be dry when the lake is moderately high or it may be impassably wet when the lake-bed itself can be traversed by vehicle, as in October 1953. In January 1946 there was so little water in the plains that wells had to be dug, although the rains were on. Vehicles were used in the plains in February 1946. The camp near the water hole at Nziga was flooded out early in 1947, so that wet season seems to have checked the drying out somewhat. The year 1948 was described as less wet than usual and the District Commissioner, Sumbawanga, reported deaths of hippos in north Rukwa. In both 1948/49 and 1949/50 the local rains were poor. In 1949 the south lake shrank extraordinarily and stopped the fishing; and as early as February Mr. Bredo recorded that the north lake was nearly dry. In 1950, when the south lake was not so low, the water was only ankle deep and a mile wide in the neck of the lake on 6th June (Mr. Vesey-FitzGerald) and later a vehicle was driven across the neck by A. C. van Dyk. The decade was therefore, broadly speaking, a period of increasing dryness.

The inflow of water in 1951/52 was fairly high, causing extensive flooding of the northern plains which lasted until October 1952, but the lake did not rise particularly high. The Bonde ya Kavuu filled up, covering up a banked track from Soda to Tumba that had been made in early 1949. The Bonde could not again be crossed until 1954 and the road was re-opened in May of that year. Although the Bonde remained wet, the north lake was drying up extensively in 1953.

Michelmore was in the valley in every year from 1933 to 1945 except 1939–1940. H. A. F. Lea was there in 1936–37. Both of them visited their old experimental area as members of the Council of the International Red Locust Control Service in July 1953. They agreed that the grass plains had never been even nearly so extensive in their time as in 1953. For most of the dry season, the bare, dry, lake-bed was used by vehicles going from Milepa to the collar. In September the neck could not be crossed by vehicle, but on 11th October, Mr. I. A. D. Robertson reported that, accompanied by Messrs. Forrester, Beesley, and Horn, he had driven across the neck to the north-east escarpment. On 27th October with almost the same party, I was prevented by mud from crossing the broad part of the north lake near Zimba, but was able to cross opposite Kisa.

The 1953–54 rains did little to fill the north lake. On 26th March 1954, when the rains would not normally have ended and water levels would be almost at their highest, my wife and I drove on the dry lake-bed from near Milepa to a point 14 miles due east of Zimba. On 26th May, aircraft reconnaissance by Mr. Frank Gillman showed elongated pools of water in the neck and extending towards the northernmost point of the north lake, but very extensive dry areas. In August, Mr. Roy Forrester dammed the Iwana Channel and put a track right across the Collar to Udinde. On 4th November. I drove square across the north lake-bed at its widest place, from about 4 miles south-east of Zimba to about 3 miles north-west of the Wuku River. Lorry loads of materials followed across this route in

the next few days, for there was an unprecedented locust infestation on the north-east side, and the route was used into December, after the rains had begun. From being a few hundred yards wide, the grass plains on the Konongo side had spread up to 4 miles into the former lake-bed. On 11th November 1954, aircraft reconnaissance showed that there was no water near the western shore between Zimba and Ukia, where it normally lies long, though there was dark and therefore damp mud. This provides the only detailed information to the effect that the north lake contained no water at all. On previous dry occasions, no such extensive investigation was possible.

From these facts, two periods of extreme dryness stand out, namely the 1890's and from 1948 to 1954, the latter relieved by the 1951–52 wet season. Three periods of deep water are known, namely about 1882, 1904 and 1937. The last wet period declined only slowly and it is also evident that it built up slowly, for there is evidence for every year from 1933 to 1937 that there was by no means a dry lake. Apart from these clear results, it is also possible that the water was very low in 1920 and low in 1929.

TABLE 1

WATER LEVELS IN LAKE RUKWA

Date	*Lake levels*	
Before 1873	Unknown	—
1873 Sep. or Oct.	Medium or low	Waller 1874
1880 April	Fairly high	Thomson 1880
1882 October	*Very high*	Kaiser 1883
1883–1888	Unknown	—
1889 Nov.	Low	Johnston 1890 Cross 1891
1893 July	Low	v. Wissmann 1893
1897 early	Very low	Langheld 1897
1897 Aug.	Low	Wallace 1898
1897 Nov.	Very low	Ramsay 1898
1898 ?	Dry	Sprigade 1904
1899	Dry	Dantz 1903
1899 Oct.	Low	v. Prittwitz
1901 Oct.	Much higher	v. Prittwitz
1904	*Very high*	Meyer, 1909
1905	*Very high*	Mateo (Albrecht, 1952)
1906–1919	Unknown	—
1920	Dry	White Fathers Mateo
1921–1928	Unknown	—
1929	Low	White Fathers
1930	"Filled up"	White Fathers
1933 Nov.	Fairly high	Michelmore 1937
1934 Apr.	"Deep"	Michelmore 1937
1935	"Deeper"	Swynnerton 1946
1936	"Went down"	Swynnerton 1946
1937	*Very high*	D.C. Ufipa Lea and Webb, 1939 Michelmore, *in litt.*
1938	*Very high*	Bousfields
1939–41	High, falling	Mateo
1942	High, falling	Forrester.
1945 Feb.	Still high enough for boat in north lake	I.R.L.C.S. records.
1946	Medium ?	
1947	Medium ?	
1948	Low	
1949	Dry	
1950	Dry	
1951	Fairly dry	
1951/52	Floods in plains	
1953	Dry	
1954	North lake entirely dry	

THE LOCUSTS AND THE RUKWA VALLEY

The first locust plague which can definitely be attributed to the red locust was recorded in Natal and Zululand from 1847 to 1854; there is no evidence of where it originated. In the same regions, the second plague lasted with fluctuations from 1892 to 1910 (Faure, 1935). It was recorded in Nyasaland newspapers at the end of 1893, though there may be some confusion of details with a plague of the West African Migratory Locust (*Locusta migratoria migratorioides* R & F) which started just before (Smee, 1940, 1941). Although Europeans were by this time occasionally visiting what we now know to be red locust outbreak areas, the existence of the plague of the other species of locust makes their references to unspecified "locust" swarms of little value. If this second plague did originate in the same outbreak areas, it probably began about 1889, a year when only one of the outbreak areas appears to have been visited, the South Rukwa; neither Johnston nor Cross provided any useful information about locusts. Their statement that there had been "no rain" there for two years does not suggest suitable conditions for successful locust breeding, but we now know that the region that they visited often has much less rain and more famine than Central and, more particularly, North Rukwa. This plague was certainly widespread in eastern Africa (Harris, 1933).

After the end of the second plague, the next information comes from the White Fathers' Missions, through the courtesy of Mgr. J. Holmes-Siedle, Bishop of Karema. In April 1913 a swarm settled at Mamba Mission and in October 1914 another came to Zimba Mission, both in the Rukwa Valley. More significantly, in July 1914 an immense cloud of locusts arrived at Kate on the Ufipa Plateau. Inquiries by Father Aarden showed clearly that these were red locusts (Chifipa—*mbalazi*) and not *Locusta* (*kitwekoko*) which was recognized by the "hair on its chest" and remembered from about 1890. Then there were red locust swarms in Uganda in 1915–1918 (Johnston and Buxton, 1949). The Abercorn District Annual Report for 1920–21 also refers to occasional red locusts which caused no damage, and Father Bagot remembered "plenty of locusts" in the Rukwa in 1920 (Lea and Webb, 1939). It is thus possible that a small plague originated in Rukwa in 1913 and died out in Uganda in 1918, but it is also possible that the Uganda plague began in the Malagarasi Basin. The 1920 reports may refer to an independent upsurge.

The next reports are from Chala Mission of the White Fathers, on the Ufipa Platéau, referring to 17th May 1922 and 20th June 1926. During this decade, there may often have been swarms within the Rukwa Valley. The Ufipa District Annual Report for 1925 reviews the possibilities of agricultural development and mentions the failure to establish the cultivation of cassava in the Rukwa "owing to the attacks of the locusts"; this may have been part of the prolonged resistance of the natives to adopting cassava, which is now an important famine-prevention crop in Rukwa. But in the same report, reference is made to locusts appearing on the plateau in August 1925. Harris (1933) mentions reports of swarms in the valley in 1926. It seems likely, however, that there was a considerable incidence of locusts at least inside the Rukwa and possibly on the plateau; which did not seem exceptional to those who knew of it and so passed unrecorded (see Harris, 1933, p. 3). The Ufipa Annual Reports record one swarm at Rungwa Village on 29th March 1930 and a small number of swarms in 1931, but the first page of the Annual Report for 1932 asserts that "Locusts, of course, we have always with us

and a great deal of damage was done to malezi crops." A letter dated 18th September 1931, from the District Commissioner, Sumbawanga, to the Provincial Commissioner, Kigoma, says "as you are aware there is little doubt that locusts have been breeding in the Rukwa area for the last 3 or 4 years without any report being rendered".

Although red locusts breed every year at very low densities in hundreds of places scattered over Africa, there is no evidence of swarms originating outside a very small number of places; swarms may give rise to swarms outside the outbreak areas, but the first swarms arise from sparse populations of parents in outbreak areas. It therefore seems likely that the Ufipa swarms of 1922, 1925, 1926 and 1930, were the result of specially successful breeding in the Rukwa in the immediately preceding rainy seasons. The absence of definite reports for 1927–28 may be fortuitous, but it may mean that breeding had been less successful in those years. The Annual Report for 1929 says there were no swarms on the plateau in that year.

By 1931, the third major plague was well under way, having probably begun in 1929 by a few swarms from Mweru wa Ntipa in Northern Rhodesia, supported by the Rungwa Village swarm from Rukwa in early 1930 and by others which were reported on the Ufipa Plateau in April, July and August (Harris, 1931). The third plague went on until 1944 (Morant, 1947).

In 1933, Michelmore first arrived with Harris in the Rukwa Valley. From then onwards, information about locust swarms was increasingly sought and systematically recorded. At first, the organization was minute and the information that survives is sketchy and difficult to interpret. Up to 1930, reports of swarms in or near the Rukwa Valley may be taken to indicate the years in which breeding in the valley had been successful; but, after 1930, two complications make such assumptions less certain. First, once the plague began, large-scale breeding occurred not only in the valley but also on the Ufipa Plateau and eventually over an enormous area. Very detailed reports are necessary before one can assign a breeding place to a particular swarm and one can in fact seldom do so. Second, from 1942 onwards, the locust hoppers were destroyed to an increasing extent in the Rukwa; consequently the absence of reports of swarms may mean that breeding was poor or that control was good. In order, therefore, to be able to correlate locust reports with lake levels and other conditions affecting breeding, much more detailed information is required after 1942 than before.

The plague itself has been described by Morant (1947); it was not uniformly severe in every year or in every place. The Ufipa Plateau was badly affected, with crop damage, in 1933–35 and in 1939–40, but by 1942 Ufipa was "free from the attention of locusts". During this period, Lea and Webb worked in Central Rukwa (February 1936–May 1937). Michelmore had reported a 15-mile long swarm from Kinambo to Msia in November 1933, an invasion of swarms from the south in early 1934, and a swarm going up the escarpment in August 1935, but Lea and Webb (1939) record no swarms of that character. In most of the North and Central Rukwa, a walking man saw zero to three locusts per hour, but near Kalumbaleza there appears to have been a swarm that could not be re-discovered, while there was a static concentration of 200 acres in Central Rukwa. In certain experimental plots at Milepa, the *average* number of locusts flushed was 60 per 100 paces over nearly 2 miles, a density which we should nowadays regard as likely to become dangerous after further breeding. In most of the Milepa–Kampunda

area, however, only 200–500 locusts were flushed per hour (say 4–10 per 100 paces). In a letter to the Anti-Locust Research Centre dated 11th March 1944, Michelmore said that Central Rukwa, according to all native reports, had been free from swarms between 1938 and 1942, though North Rukwa may not have been. As far as the evidence goes, therefore, while the plague was in full swing the breeding in Rukwa itself had been rather unsuccessful for a number of years, in the late 1930's.

In 1941, Michelmore began the Red Locust Control Service. No substantial field work was done in that year, but a slender scouting and reporting system was set up in 1942. Plague swarms still occurred on the Ufipa Plateau. In October 1943, Abercorn, the Ufipa Plateau, and the Rukwa Valley were invaded from Rhodesia. This was the last plague movement in the region.

Inside the valley, 1941–42 was a poor locust year for Central Rukwa. From then until 1945, Central Rukwa can hardly have produced many locusts, for although almost the only control was by beating, which is most inefficient, no migrant swarms were reported. It is noteworthy that in both 1942–43 and 1943–44 it was only the Limangombe area of Central Rukwa that gave some trouble, an area that has in recent years been far from the lake shore and almost free from locusts.

The situation in North Rukwa was different. Heavy breeding was reported in the Kavuu delta in 1941–42, leading to swarms that milled about near Kalumbaleza, while some emigrated to the north and west. No detailed information is available about the 1942–43 breeding, except that control was by beating and was completed in four weeks, but in 1943 came a Rhodesian swarm, which probably affected mainly South Rukwa. The following breeding season produced populations at swarm density which, however, remained sedentary in North and Central Rukwa. At the end of 1944, Michelmore wrote "the plain has dried up to a large extent and locusts are in great numbers, the danger of swarms forming unmolested is a serious one" and he suggested mechanizing control.

The 1944–45 rains produced early flooding in Central Rukwa and seem to have largely destroyed the eggs in the ground. But in North Rukwa hatching started on 4th December and it was evident in the new year that there was a most serious outbreak east of the Kavuu. Some 370 beaters produced little impression on it and by mid-February 150 square miles were reported heavily infested. Warnings were issued and during 1945 between 50 and 100 swarms emigrated from the North Rukwa (Michelmore, 1947).

The dry season of 1945 saw tremendous activity in the Rukwa Valley to suppress any further outbreak (Bredo, 1947). In the previous year Bredo had had about 2 tons of bait in Northern Rhodesia and Michelmore had had about 5 tons for his unaided use; in 1945 some 550 tons were brought in along specially made roads and 13 Europeans were employed. Not only this bait, containing 10 tons of sodium arsenite, but also a sample consignment of BHC was entirely used up, mostly in North Rukwa. The killing went on until the end of March and although there were reports of swarms in the valley in early 1946, there was reported to be no danger of any emigration. The combination of a very big parental population and a very large control effort makes it difficult to assess the success of breeding; it was probably fairly good.

Nothing is known about what happened to the emigrant swarms of 1945, but it was suspected that some returned to Rukwa and some bred near Lake Katavi. In 1929 and 1930, it seems to have taken only a few swarms to start a 15-year plague, while in 1945 the big emigration seems to have led to little, possibly only to an upsurge that occurred in Malagarasi in 1947.

The 1946–47 rains led to extensive early flooding, so that camps at Nziga and Katwa Makondo had to be abandoned. Just before the rains started, a large swarm flew westwards across the North Rukwa to Mukamba and laid eggs, not in the grass plains but in the fringing forest, for many miles towards and beyond Milepa. At the time, it was suggested that this swarm came from outside the valley; there had been no swarm reports from that direction for some years, but the region is almost uninhabited. With the extra knowledge that we have today, however, it seems much more likely that it came from the eastern North Rukwa itself, near Kipangati, as swarms have done several times since. If that is correct, it was composed of survivors from the great 1945–46 campaign. However that may be, by April and May 1947, half a dozen swarm reports referred to the Ufipa Plateau, later in the year one was in Abercorn District, one swarm of 1,500–2,000 acres was repeatedly reported near Namanyere on the plateau, and 3 swarms were reported near Uruwira. It was in that year that the first systematic attempts were made to attack adult locusts, aircraft spraying being shown to be effective but expensive (Gunn *et al.*, 1948) and dusting by a light machine on a truck to be ineffective. Widespread investigations revealed no swarms further afield, but clearly 1946–47 had been a good breeding season in the valley.

The 1947–48 breeding season was complicated by the immigration of a swarm from the plateau; it was seen to descend the escarpment near Mukamba and divide to North and Central Rukwa. After the hopper destruction was over, there were concentrations of locusts in 1948 in both these areas, but no swarms. The first heavy spraying machine was used against these adult locusts. The following rainy season began the first real drought year and breeding was so poor that the labourers were employed on making an embanked road from Soda to Tumba in early 1949. It looked as if the locusts had ceased to be troublesome.

The season 1949–50 was also one of low rainfall but the breeding was highly successful in both Central and North Rukwa. In mid-April 1950, the Chieftainess of Sakalilo, Mwene Maria, reported swarms damaging crops at Milepa. Only one small swarm got out of the valley; that reached the Lusanzi ledge on the escarpment above Ngongo in August, was immobilized by cold, and eaten by the local villagers (Albrecht, 1950). It was in 1950 that, for the first time, there were extensive operations against adult locusts in the valley, in both North and Central Rukwa, and it was in that year that mechanization of control began.

The 1950–51 breeding season was reported to be heavy but the resulting adult population was small; some swarms of adults were destroyed and possibly would have emigrated if they had been left alone; none remained by September. The heavy rains of 1951–52 deeply flooded the Iku plain and caused floods in North and Central Rukwa that lasted nearly to the end of the 1952 dry season. A considerable adult population was left, in North Rukwa especially, but it remained static, possibly because of the damp conditions.

The wet season 1952–53 opened in early November with widespread heavy rain and the locusts laid their first eggs. Then there was a dry period lasting until after Christmas; practically all these first eggs died by drying in Central Rukwa and many of them in North Rukwa too, so that 1953 saw reasonably low adult populations. It was noteworthy, however, that breeding had occurred in 60 square miles of *mpangali* (*Sporobolus robustus*) grass in Central Rukwa that had previously been under the flood waters of the lake, while Limangombe, near the trees, produced no hoppers.

In 1953, the first attempts were made to estimate the number of adult locusts in the North Rukwa. The counts made then, interpreted by calibrations made by Mr. Scheepers in the following year, indicated an early dry season population of about 20 million locusts in about 300 square miles. By the end of the season, control measures reduced these to about 18 million, which incidentally, would weigh about 50 tons. This averages one locust in more than 45 square yards, a density far too low for economical attack by insecticides. The locusts were not, of course, uniformly scattered and there were still a few places where they were dense enough to attack, but the ground was too rough for the machines to operate there. The total locust population of Central Rukwa (550 square miles) was similar but was not estimated so carefully.

The 1953–54 rains were not particularly heavy but they were well distributed in the early part of the season, so that breeding was highly successful. It does not seem to have reached the highest possible rate of 100 times increase (Robertson, 1954), but it was probably about 50 times. Estimates made by Mr. J. Haydn Lloyd indicate that some 470 million hoppers were killed and a further 200 million adults by the end of May, leaving about 250 million adults. One swarm escaped from the valley in May but was destroyed by aircraft spraying not far from Namanyere. Another swarm was reported at Nyonga, 45 miles north-east of Rungwa, at the end of July but was never found again in spite of prolonged search. A third migrated from the Kipangati area of North Rukwa early in September; at least part of it was probably responsible for a big rise in population near Lake Katavi, the most northern end of the Rukwa outbreak area. In searching for the possible remainder, confusion was caused by the extension of the current desert locust plague as far south as Nyonga and by a plague of the small grasshopper *Faureia* originating in Ruanda-Urundi; many reports of these two species were investigated, but no migrant red locusts were found. Further control by both aircraft and ground machines reduced the population in the Rukwa still further to about 190 million by the end of August and to about 60 million by November 1954, when the rains began. The control service had, after a most arduous year, reduced the rise of 50 times to about 3 times the population of November 1953. There is little doubt that but for the effectiveness of control, many swarms would have emigrated in 1954 and the 1953–54 breeding season must be regarded as highly successful in the North Rukwa. In the Central Rukwa it was also rather successful, especially in places remote from the trees which would, in wetter years, be submerged in the lake edges; but no such detailed assessments of population were made there. The 1954/55 breeding season was very successful in North Rukwa and the Collar; the rains were not heavy and although some water entered the north lake from the River Rungwa and from the south lake, light vehicles were used to cross the valley near the north-western edge of the lake bed as late as March 1955.

Swarm of Red Locusts (*Nomadacris septemfasciata* Serville) near Rungwa Village in the Rukwa Valley of south-west Tanganyika on 20th March 1955. This is the earliest date in the year at which a swarm is known to have emigrated from the grass plains of the outbreak areas, the previous earliest being 29th March 1930, at the beginning of the last great plague. The 1955 swarm was destroyed by aircraft spraying by I.R.L.C.S. in the few days following.

Photo: D. Vesey-FitzGerald

TABLE 2

LOCUSTS IN THE RUKWA VALLEY AND OUTSIDE

1847–54	*Plague* in South Africa. Origin unknown.
1892–1910	*Plague* in South Africa. Rhodesia and East Africa. Origin unknown.
1913	Mamba.
1914	Zimba, Kate (Ufipa Plateau).
1915–18	*Plague* in Uganda only.
1920	Abercorn.
1922	Chala (Ufipa Plateau).
1925	Ufipa Plateau.
1926	Chala.
1929–1944	*Plague* over most of Africa south of the equator.
1930	Rungwa, several swarms on Ufipa Plateau.
1936–41	Few locusts in Rukwa Valley.
1942	Swarms from North Rukwa.
1943	Last plague swarms on Ufipa Plateau; few locusts in Rukwa.
1944	Many locusts in Rukwa, no swarms.
1945	50–100 swarms left Rukwa.
1946	Swarms in Rukwa but no emigrants.
1947	Swarms from Rukwa; Ufipa and Abercorn.
1948–49	No large populations of locusts.
1950	Heavy populations, Lusanzi swarm on plateau.
1951–53	Moderate or low populations.
1954	Swarms to Kisii (plateau) and Katavi from North Rukwa.
1955	Heavy breeding in North Rukwa and the collar.

RELATIONSHIP BETWEEN LAKE LEVELS AND LOCUST BREEDING

When we come to examine the reasons for good and bad breeding years, we find only two causes put forward for bad years; as in 1952–53, there was a period of drought after the first main egg laying, and many eggs dried up and died in the ground. In 1944–45 in Central Rukwa, on the other hand, it was reported by Michelmore that extensive early flooding occurred after egg laying and complete areas of eggs were destroyed by excessive water. A good year for locust breeding seems to be one in which there is sufficiently well-spread rain to keep the soil moist but without flooding it. The question is, however, whether the general level of the lake and the water-table affect the success of breeding.

When we come to collate the information we find a most disappointing series of gaps. The only reports of locusts in the valley before 1913 are for 1893–94 and th e species is not known; there was then a plague of *Locusta* in the region. While the lake appears to have been low or dry for ten years from about 1889, this cannot be firmly related to the plague of 1892 1910, for this plague may not have started in Rukwa at all, but, for example, in Mweru wa Ntipa. The locust reports of 1913–1920 can be woven into an uncertain pattern of origin in Rukwa, but nothing is known of lake levels before the dry year of 1920.

There were swarms both inside and outside Rukwa in the ten years after 1920, but the only information on the lake is that it was low in 1929 and higher in 1930. It is clear enough that the main plague of 1929–1944 began elsewhere, in Mweru wa Ntipa.

There is a conclusion to be drawn from the next decade, namely that once the lake level was high, no swarms were produced in the Rukwa. This continued up to 1942, when the lake receded markedly and the first primary swarms appeared.

From then until the present day, there has broadly speaking been increasing dryness, the 1952 floods in the plains being exceptional. During the same period, there has been a progressive increase in the cost of control, which has only just managed to succeed in a number of years, so that it looks as if the success of breeding or the difficulty of control has increased as the plains have extended.

That is not to say that dry years are good breeding years for red locusts, for 1948/49 and 1952/53 were dry and also poor breeding seasons. Nor is it true that when the plains flood the locusts die; a few heavy rainstorms will flood the plains and make control extremely arduous without seeming to interfere with the locust hoppers, once they have hatched, for they do not live on the ground but up in the grass. There is, however, a hypothesis which is worth examining. If the lake level is high, presumably the water table under the grass plains is also high and it then takes little rain to waterlog the ground; such ground is unfavourable to the eggs. If the lake and the water table are low, it is then possible for suitably distributed rains to produce damp soil, comparatively well-drained, of a favourable texture for the eggs. Moreover, in these circumstances the area available for breeding is much larger because of the recession of the lake. If this hypothesis is correct, we are now passing through a most favourable phase for locust outbreaks and cannot expect relief for more than a year or so at a time until we enter a phase of high lake levels like 1937–1942. There are indications, of no more and no less strength, that this hypothesis holds for the other outbreak area of the red locust, Mweru wa Ntipa in Northern Rhodesia (Gunn, 1955).

It seems unlikely that sufficient data can be acquired about the past to permit a rigorous analysis, but the present situation is that paucity of facts permits easy theorizing. It is hoped that more information will be provided by the readers of this article.

It is a pleasure to record my thanks to the Librarian, Royal Geographical Society, London (Mr. G. R. Crone) for invaluable information about early literature concerning Rukwa and also to Mr. G. Hunter for his cheerful help in the library of the King George V Memorial Museum at Dar es Salaam. Information from the Annual Reports of Mr. H. J. Bredo covering his period (1945–52) as Director of the Service proved to be very useful. It is a pleasure to acknowledge with gratitude the assistance of Dr. B. P. Uvarov, C.M.G., F.R.S., the Director of the Anti-Locust Research Centre in London, and the District Commissioner, Sumbawanga (Mr. R. S. Thornton) for access to the Ufipa District records.

REFERENCES

Albrecht, F. O. 1950—A report on the Lusanzi swarm. TS.

Albrecht, F. O. 1952—Natural changes in grass zonation in a Red Locust outbreak centre in the Rukwa Valley, Tanganyika, TS. 8 pp.

Boileau, F. F. R. and Wallace, L. A. 1899—The Nyasa–Tanganyika Plateau. *Geogr. J.*, London 13, 577–623.

Bredo, H. J. 1947—Report on the control measures and their organization against the Red Locust (*Nomadacris septemfasciata* Serv.) in the outbreak centres Mweru wa Ntipa and Rukwa since 1938. Report to Council I.R.L.C.S. TS. 81 pp.

Bredo, H. J. 1948, 1949—Reports on control measures and their organization against the Red Locust, 1947–48 (TS. 94 pp.) and 1948–49 (TS. 48 pp.).

Bredo, H. J. 1951, 1952—*Annual Report I.R.L.C.S.* for 1950–51 (TS. 58 pp.) and 1951–52 (TS. 53 pp.).

Cross, D. K. 1891—Notes on the country lying between Lakes Nyassa and Tanganyika. *Proc. roy. geogr. Soc.*, London 13, 86–99.

Dantz, A. 1903—Die Reisen des Bergassessors, Dr. Dantz, in Deutsch-Ostafrika in den Jahren 1898, 1899, 1900. *Mitt. Deutsch. Schützgebieten*, Berlin 16, 131–134.

Dixey, F. 1953—Variations in lake levels and sunspots. *Colon. Geol. Mineral Resources*, London 3, 213–218.

Faure, J. C. 1935—The life history of the Red Locust. *Bull. Dep. Agric. S. Afr.* Pretoria No. 144, 32 pp.

Fulleborn, F. 1900—Das Deutsche Nyasse- und Ruwumagebiet. *Verh. Ges. Erdk. Berlin* 27, 332–339.

Gunn, D. L. 1952—The Red Locust. *J. roy. Soc. Arts*, London 100, 261–284.

Gunn, D. L. 1953, 1954—*Annual Report Director I.R.L.C.S.* for 1952–53 (TS. 70 pp.) and 1953 (TS. 27 pp.)

Gunn, D. L., Lea, H. A. F., Botha, D. H., Callaway, S., Clackson, J. R., Immelman, A., Taljaard, J. J., and Ward, J., 1948—Locust control by aircraft in Tanganyika. I.R.L.C.S. Johannesburg. 153 pp.

GUNN, D. L. 1955—Mweru wa Ntipa and the Red Locust. *N. Rhod. J.* Livingstone, 2, no. 6: 3–15.

HARRIS, W. V. 1931—*Annual Report Dep. Agric. Tanganyika* for 1930. Dar es Salaam. 65 pp.

HARRIS, W. V. 1933—The Red Locust. *Pamphl. Dep. Agric. Tanganyika.* Dar es Salaam No. 10, 10 pp.

JOHNSTON, H. H. 1890—Journey north of Lake Nyassa and visit to Lake Leopold. *Proc. roy. geogr. Soc.*, London 12. 225–227.

JOHNSTON, H. B. AND BUXTON, D. R., 1949—Field observations on locusts in eastern Africa. *Anti-Locust Bull.*, London, No. 5, 73 pp.

KAISER, E. 1883—Reise von Gonda zum Rikwa-See. *Mitt. Afrik. Ges Deuts.*, Berlin 4, 91–95. Obituary on page one.

LANGHANS, P. 1899—Mgr. Lechaptois' Reisen auf der Ufipa-Hochflache und im Rikwa-Graben. *Petermanns Mitt. Justus. Perthes' geogr. Anstalt*, Gotha 45, 225–228.

LANGHELD, W. 1897—Bericht des Hauptmanns Langheld über seine Expedition nach Unyamwesi. *Deutsch. Kolonialblatt*, Berlin 8, 511–512.

LEA, A. AND WEBB, D. VAN V., 1939—Field observations on the Red Locust at Lake Rukwa in 1936 and 1937. *Sci. Bull. Dep. Agric. S. Afr.* Pretoria, No. 189, 81 pp.

MEYER, H. 1909—Das Deutsche Kolonialreich. Vol. 1. Article 20 Rukwasee, pp. 346–353. Bibliogr. Inst., Leipzig & Wien.

MICHELMORE, A. P. G. 1937—Locust investigations in Tanganyika. Unpubl. Rep. to Economic Advisory Council, Committee on Locust Control No. 4, TS. 64 pp.

MICHELMORE, A. P. G. 1945—The International Red Locust Control. *Tanganyika Notes and Records* No. 20/48–54,.

MICHELMORE, A. P. G. 1947—The habits and control of the Red Locust in outbreak areas and elsewhere. *Bull. ent. Res.* London, 37, 331–379.

MONSON, R. A. 1936—Across Africa on foot. Elkin Mathews and Marrot, London. 386 pp.

MORANT, V. 1947—Migrations and breeding of the Red Locust (*Nomadacris septemfasciata* Serville) in Africa, 1927–1945. *Anti-Locust Mem.*, London No. 2, 60 pp.

NUTT, W. H. 1896—Journey to Lake Rukwa. *Geogr. J.*, London 7, 427–428.

RAMSAY, H. 1898—Expeditionen nach Ruanda und dem Rikwa-See. *Verh. Ges. Erdk. Berlin* 25, 302–323.

RICARDO, C. K. ca. 1938—Report on the fish and fisheries of Lake Rukwa, etc. Crown Agents, London. 78 pp.

ROBERTSON, I. A. D. 1954. The numbers of eggs in pods of the Red Locust. *Entom. monthly mag.* 90, 254–255.

SCHNEE, H. (Ed), 1920—Deutsches Kolonial Lexikon. 3 Vols. Article on Rukwa, Vol. 3. p. 193.

SMEE, C. 1940—Notes on the locust outbreak of 1893–1910. *Nyasaland Tea Ass. quart. J.* Blantyre 5, 17–19.

Smee, C. 1941—Notes on the locust outbreak of 1893–1910 (cont.). *Nyasaland agric. quart. J.* Blantyre 1, 20–22.

Sprigade, P. 1904—Begleitworte zu den Karte der Gebiete am südlichen Tanganjika- und Rukwa-See. *Mitt. Deutsch. Schützgebieten* Berlin 17, 97–98.

Swynnerton, G. H. 1946—Report on an investigation of the Fisheries of Lake Rukwa. TS. pp. 8–11.

Thomson, J. 1880—Journey of the Society's East African expedition. *Proc. roy. geogr. Soc.* London 2, 721–742.

Thomson, J. 1881—To the Central African lakes and back. Vol. 2 p. 226. Sampson, Low. London.

Uvarov, B. P. 1951—Locust research and control 1929–1950. London, H.M.S.O., *Col. Res. Publ.* No. 10, 67 pp.

Vesey-FitzGerald, D. 1950—*Annual Report I.R.L.C.S.* for 1949–50. TS. 49 pp.

Wallace, L. A. 1898—Expedition der Engländers Wallace zur Feststellung der Ausdehnung des Rikwa-Sees. *Deut. Kolonialblatt.* Berlin 9, 169–170.

Waller, H. (Ed). 1874—The last journals of David Livingstone in Central Africa from 1865 to his death. London, John Murray. 1st Ed., Vol. 2, Chap. 13, 335–337.

v. Wissmann, H. 1893—Einen Berichte des Kaiserlichen Kommissars Majors v. Wissmann. *Deut. Kolonialblatt* Berlin 4, 492–493.

THE LIFE OF JUSTIN

Part II

CHAPTER XII

MR. STEGGALL'S DEPARTURE ON LEAVE

When Mr. Steggall knew of the exact date that the steamer would arrive to take him on leave, he called us all together. Mr. Binns and Mr. England were also present. He said "My friends, now I am about to go to England, I and Yohana will stay there six months, at the end of which we will return. Meanwhile you will be in the hands of Mr. Binns and receive your food from him. Each man will be given his allotted task."

"Justin, have you yet met Mr. England? He is a school teacher from Europe and one who does not like lazy children. He beats them! You will soon find out if you are lazy. You will continue your schooling until I come back. Filipo and Timoteo you will start a carpentry course in the workshops as I promised you before we came down from up-country."

After a further week, the steamer arrived. Its departure was timed for two o'clock. We went in rowing boats out to the ship, climbed up a ladder and went aboard the steamer. A liner is like a town, not a village, and we were excited when we were shown all the workings of this town, but when the time came for parting, our happiness left us and even our teacher had tears in his eyes. But what could we do? It was his luck to be going home! We went back to the shore in the rowing boat.

All that remained now was for each one to get on with his job: for my part, as I was selected for teaching, I requested Mr. Binns to put me in with teacher Thomas Serenge who greatly loved children. He had come to Taveta when we were doing our examinations and had seen how keen I was. Since we knew one another, Mr. Binns agreed and this was greatly to my advantage as I knew that Thomas would not allow me to be late for school. At the commencement of term, I was placed in Standard IV, but after only two days I was raised to Standard III. Here I stayed for two months and on examination day, I jumped to Standard II. It then became apparent that I had advanced beyond the standard of this school just as at Taveta where I left the three teachers Paulo, Jeremiah, and Marko far behind. At this point the headmaster of the school said to my teacher "If there is no satisfactory teacher at Taveta, I will send Justin there since he has excelled at his work of teaching." My teacher agreed at once. The headmaster then wrote a letter to say "I am glad to hear from Mr. England that you are now sufficiently advanced to help in teaching. You will proceed to Taveta as a teacher and after I have come to see you there, you will once again return to the coast." At Taveta there was one European called Verbi but he was not a teacher: his job was to build houses for the Europeans who were shortly expected. I was told to travel with Mr. Verbi who had come to the coast to take his building material up-country. This was in the year 1894.

CHAPTER XIII

SAFARI IN THE OLD DAYS

You will understand that our journey was on foot but nevertheless I arrived safely. I settled down to work without hesitation. I had just left the hands of my own teachers, so I copied their methods and their timetables. When Mr. Steggall returned from Europe, he found that I had become an experienced teacher. This was 1895. Two months later, a bishop came, namely, Bishop Tucker who had come from Uganda where he had succeeded the late Bishop Hannington, killed by Kabaka Mtesa of Buganda, father of Kabaka Mwanga. During this bishop's stay in Uganda, things were more peaceful during the reign of Kabaka Mwanga, but I will leave the history of Uganda people till later so that I can get on with my own story.

This Bishop confirmed us by the laying on of hands. Two of us were confirmed that day, then the Bishop departed for the coast. The evening before he left, Mr. Steggall called me and said "Tomorrow the Bishop goes to the coast and I want you to go with him as there is a teachers' training school being planned. A new headmaster has already arrived to run it and the quarters for the pupils are ready so I want you to be in it from the start so that you may not be left behind." I was delighted by the prospect, as my friends were also on this course. Further, I was no longer afraid of the sea but bathed in it like my companions. We went to bed and next morning set off. If the journey was one of hardship, my thoughts went ahead of me to the work I was going to undertake. The journey was typical of those days. On the evening of our arrival at the base of the hill called Maungu, we met an Arab who had nine porters with him. He brought news that the road construction had now reached a place which today is called Mackinnon Road.

Since the paths at that time presented no easy going, we broke camp at five in the morning, packed up and were off by five thirty. That day we reached road-head but I cannot remember at what time. Once on the road, the going was better and we reached our camp without incident. On the following day, we reached Rabai. Now some of the bishop's porters were going via Mazera, crossing to Mombasa island at Makupa. If I joined up with them, I would get a chance of going to Kilindini where teacher Levi worked; he had come to Kisauni to greet us. I was allowed to do this, so we proceeded and slept at Changamwe and on the following day ferried across at Makupa. They had started to build the bridge there and I was surprised at the number of Indians employed on it.

On arrival at Kilindini, I asked for the house of teacher Levi. He was very pleased to see me and killed a duck for the evening meal in my honour. This was the first and last time that I had ever tasted duck, for I have never eaten one again. It is not that I do not like it, but no one has ever offered it to me since! As the porters had already gone off, that teacher took me himself to the ferry called Shambi, which is opposite Kisauni. We both crossed over and arrived at the house of teacher Thomas Serenge who was Levi's friend. The three of us had a very happy evening together. I was especially happy as Thomas was a father to me. He was one of the first pupils in the new seminary under the Rev. J. E. Hamshere ([12]). In the morning I was shown around the school, and met six of the pupils who were awaiting the arrival of their teacher and preparing their work for him. When he arrived, he started questioning them. I sat in silent amazement, "Would I ever be able to work like this?" Each one had his books and his ink and his pen, and sat a long way from his nearest neighbour. When the master

came in, we all stood up. The teacher was wearing a long gown like a *kanzu*. He looked around the class and when he saw there were seven, said "Oho, is that the runaway Justin? Come here!" I went up and he shook hands with me and we greeted one another.

On that day I did no work from morning till noon. At two o'clock I was shown to my room which had a small table, a bed, a chair and a little lamp. We were now seven pupils and, of the seven, only one was married, namely, Thomas, and he lived in his own house. I was given the uniform of the school, two *kanzus*, two sheets, one vest, two hats, and one blanket.

I was now like a native of the place and took everything in my stride. There is no need to tell you everything which I read and wrote. I listened to everything and from time to time I heard news from the outer world. In this year, 1895 I think it was ([13]), I heard there was war between the English and the Dutch of South Africa in a country called the Transvaal. I think this war went on for some time as rumours about it circulated for a long time.

One day a man o'war came in, said to be carrying Lord Kitchener on his way to the Transvaal. Later we heard that the same battleship had returned. We heard the sound of cannons and were told that Lord Kitchener had gone ashore at Mombasa. Carpets had been laid from the harbour to the house of a rich Indian called Jevanjee where Lord Kitchener was entertained. I know this house—it is very marvellous. Its floor is of seashells of every kind. I went into that house on one occasion when there was a singing competition amongst the children, and all the Europeans and Indians attended to hear the singing.

I heard that the Dutch were finally beaten and their leader called Kruger captured.

CHAPTER XIV

THE ARAB REBELLION

After this, another thing happened ([14]). We began to hear about an Arab called Mbaruku, whom others called Hamisi Kombo. It was said that he was raising an army as the Arabs were annoyed by the English who took their slaves away from them on the seas. This trouble was brewing wherever these released slaves had been placed. It started to the south of Mombasa where three Europeans were killed, but Mbaruku's wrath was mainly founded on two places where there were a great number of freed slaves, namely, Rabai and Kisauni, that is Freretown. When the Government saw that this trouble was spreading and that these settlements were insufficiently guarded, it sent over thirty Indian askaris with one Swahili sergeant and a European well-practised in the guarding of towns. They arrived one evening and the askaris were sent to a place one mile beyond the market, where they pitched their camp.

The following day there was no work in school, but we received orders from the officer in charge of the troops what we should do in the event of trouble. First of all sixteen youths were chosen, amongst whom I was one. We were drilled and in view of the emergency, we were issued with rifles and pouches containing twenty-five cartridges. The rifles were Martinis, single loaders.

The officer gave the following orders: "If any fighting starts here, it must commence on the outskirts of the town. I have placed my troops there and if you hear firing, the duty of you youths is to run to the house of the Sisters to prevent the enemy from entering. The European men will assemble at Mr. Binns' house and in the event of trouble, let off a shot in the air and we will send help at once."

Thus we had three tasks on our hands: in the morning, school; in the afternoon, training; and at night, guarding the house of the Sisters. We went on with this till we thought that the danger was over and started to say to ourselves "Now we can relax, there will be no fighting. It is only a rumour." We all thought, myself included, that there was sense in this argument, but it so happened that it was not the turn of our group to go on guard that night.

It was that very night things started happening! We were asleep and at one o'clock our crowd were awakened by the sound of bullets striking the tin roof. I woke up at once and wasted no time in dressing since we were sleeping in our clothes in case of just such an emergency. I put on my pouch, loaded my gun, woke up my companions and we all ran out with our guns at the ready. I ran to my teacher's house, but he had heard nothing. I called out but got no reply, so I beat the door with the butt of my gun until he woke up. When he heard what was going on and the sounds of shots in the air, he said "What is all this about?" I wanted to laugh, but I told him "Out you come and I will take you to Mr. Binns." When he came out, I told him "Don't be frightened, let's go, the enemy is still far off, it is only gun shots." On arrival at Mr. Binns' house, I handed over Mr. Hamshere to him and went off to the Sisters' house to see how they were getting on. Without staying to talk, Mr. Binns said "Is it only you?" I replied "Yes."

I did not wait for any more questions, but ran to the bell tower without meeting anyone, and arriving at the Sisters' house, I found them all standing outside on the *baraza*. When the head Sister saw me, she asked "Justin, are they near?" I replied "Do not be worried, they will not reach here. Have not my companions already arrived?" She replied "We have not seen a single man up till now other than you." I said "All right, don't be frightened, I will go and fight."

Day was beginning to dawn. I ran because I was feeling anxious. When I arrived at the market, I met an old man called Solomon of the Makua tribe, aged about sixty. He had a gun in his hand and was scratching his head. I asked him "What are you doing, father?" He replied "Joseph gave me this gun but ran away with the cartridges, otherwise I would join in the battle." I replied "All right, let's go together."

I took out ten of my cartridges and gave them to him. Now the sun was rising and we went and joined up with our troops. The enemy were starting to retreat. They were singing a song that indicated that they wanted to run away. It was a bad spot because it was very enclosed by trees; mango, coconuts, jackfruit and other fruit trees, so that it was impossible to see the enemy and aim at them.

When it was about eight o'clock, we emerged from the closed country and came out into an open space called Nguuni,—the enemy were like fish out of water. They sang "*Mtondwe-mtondwe, haufi maji*" (meaning uncertain). Beyond the open space there was a thicket on a small hill—the enemy were making for this cover to save themselves. In our rear, reinforcements had arrived from Mombasa with a cannon. When the enemy disappeared into the wood, the cannon sent its children to follow them! On the plain there lay eleven of the enemy who had parted from the master for ever.

I did not bother to inquire further, but out of the sixteen of us who had been issued with guns, only one arrived at the firing line, but why worry, the fighting was over and the result was peace. I heard later that the leader of the trouble ran away to Dar es Salaam which was governed by the Germans at that time.

CHAPTER XV

UGANDA AFFAIRS

I now wish to write of events which came to my ears about far-off Uganda. After the Mbaruku trouble, other rumours started to circulate. I heard that in Uganda, that far distant country, the chief was called Mtesa. I do not know about the earliest missionaries who went there, but I do know that Bishop Hannington was killed by Kabaka Mtesa, who was thus known as a murderer, but these events had happened some time back (15). But it appears to me that the missions were set up in Uganda before the country was ripe for them; then the bishop came along on a routine tour of inspection. Now those who had already gone to Uganda were just ordinary missionaries so that the Kabaka had no reason to be envious. But what must he have felt when one arrived to whom the others paid such great respect. Most probably he did not even refrain from wearing his episcopal robes. Would not the Kabaka naturally say that such a one had come to take his country from him?

In my simplicity, I think that it must have been thoughts like these that caused the Kabaka to kill the bishop, but perhaps there was some other reason, of which those who were present at that time know. After the death of Kabaka Mtesa, there was peace for a short time. At that time there were no Swahili in Uganda but Nubis because their country was nearby, and they took their religion to Uganda. I do not think Mtesa was converted to any religion, but his son Mwanga was converted to Islam by the Nubis. At this time he was a young man.

When his father died, Mwanga ruled in his stead. When he became Kabaka of Buganda, he was in a position to exert his authority and to extinguish the Christian religion about which his father had not felt strongly. Hatred increased till in the end war broke out between these two religions. The Nubi supported the Kabaka, and the other half of the Ganda, including the Katikiro, that is the prime minister, were Christians. There were two armies—that of the Kabaka and that of the Katikiro, and that of the Kabaka was beaten. He himself was captured and exiled to an island. He left his wife with child and because he had no heir, the Katikiro became regent and by reason of his goodness and kindness and sense, he was greatly beloved of the people. Later the wife of Kabaka Mwanga gave birth to a son and without doubt in the whole of Buganda no one rejoiced more than the Katikiro who was carrying a load which was not rightly his. The child was named Chwa and after baptism was called Daudi Chwa.

At that time, two Europeans came down to our Mission from Uganda. One, Mr. Pilkington, had a wound on his shoulder received from a bullet in this war. He was accompanied by four Ganda youths who stayed with us for schooling.

It was from them that I got all the news about this war, for they stayed with us for six months. This then was what I heard during my stay at the coast. Another event concerned the lions of Tsavo (16): a Mr. Whitehead was mauled by these lions when he was working for the Government at Taveta, and so came back to the coast. I was staying on the coast all this time and was now a fully-fledged teacher.

Of course everyone knows that Queen Victoria was ruling all this time.

CHAPTER XVI

JUSTIN GOES BACK TO TAVETA

When I was still at school, I became engaged and I begged for leave to go and get married, but my teacher said I must wait till my master had been informed. The reply came back that he did not wish me to get married just yet because there was no housing nor had I money to meet the expenses of the wedding. Further, it was better that I should marry in my own country. I felt obliged to follow this advice and on the evening before departure on my safari, I got leave to go and say goodbye to my sweetheart who was in the charge of the European Sisters. On the following morning, my teacher gave me a beautiful English Testament bound in leather. I was very sorry to lose this in the 1914 war when the Germans burned the house in which I was living in Tanganyika. He also gave me a table clock.

I started my journey by getting into a train at Kilindini. This was the first time I had travelled by train. It frightened me just as much as when I first travelled by sea, or rather more so because of the lions. At this time, there were no coaches but just open trucks, but I arrived at Voi safely. Thence to Mwatate, a further two days' journey and on the third we arrived at Taveta. I cannot tell you how pleased I was to see my friends whom I had been parted from for two and a half years. I was permitted to rest for a whole week without work. I was very glad to be given this leave so that I could wander around the villages, greeting my friends.

At the end of my leave, I got down to work. At this time, a house was being built for me. After a month it was ready. Then there arrived two Sisters: Miss Mayor and her sister. Their job was to teach the girls and they brought along my fiancée with them. The three of them established a girls' school and after four months, I got married. I remember the date well—it was the 7th September 1897. There is no need to tell you all about my wedding, for each generation conducts its affairs differently, but let me tell you that my first child a girl, was born on the 15th August 1898. I carried on with my teaching job at Taveta for four years, but then some difficulties arose about my salary, which I found insufficient. As my employers said they could not raise my salary, I left the job and became dependent on my cultivation. After a couple of years, I met a European at Mombasa where I had gone to sing at the Governor's house one Christmas. One morning this European came along to give us a present. He looked hard at our group and said to me "What tribe are you?" I replied "I am a Masai." He said "You see that house over there." "Yes, Sir, I see it." "All right, come along on Saturday. When you meet my boy, he will take you to where I am staying." I was amazed that a European who was obviously of rank should call up a little flea like me to go and see him. I had plenty of time on my hands as this was the Christmas holiday.

In the morning, I begged my friend Isaac Jeremiah to come along with me. We got into a small boat and arrived at nine o'clock. We met a man at the pre-arranged spot, who said "Wait here." He went upstairs and after a while, came back and told us to go up ourselves. The European gave us chairs to sit on and greeted us in our own language. "Sopai." I replied "Heva!" He laughed and said "Justin, I first heard that word in Nairobi. I had gone for a walk and saw two moran coming out of a *duka*. They dropped that word, I picked it up

and put it in my pocket, but since then I have not met a single Masai to ask him the meaning of it. Now I have popped it out at you to see how you would reply. I understand now it is a greeting. Thank you very much."

I fell down with laughing and even now laugh to myself about it. What tickled me was the idea of picking up a word and putting it in one's pocket. There and then this European said that he wanted me to look for a Masai youth to live with him and teach him Masai, for that was the best way to learn the language. I replied "That that was all very well, but where could I get a Masai here on the coast?" He replied "It will do when you go back to Taveta. I myself have spent a few days in Taveta and saw a lot of Masai about the place, but at that time I was not interested in learning their language."

He wrote a few words in Swahili and I translated them into Masai. He gave me a present of fifteen rupees. We said goodbye and I went back to Kisauni. We thanked this man beyond measure and praised him for his goodness. Perhaps if I mention his name you will know him. He was Mr. A. C. Hollis who was of some standing with the Government at that time. I last saw him after the 1914–18 war at Lushoto when he was acting for the Governor who had gone on leave ([17]).

CHAPTER XVII

MY NAIROBI SAFARI

When Mr. Hollis was in Nairobi, he heard that I had left my mission job, so he sent me a letter at Taveta and my fare to Nairobi. I packed up without hesitation as I had always wanted to see Nairobi, though it had not the reputation which it has now. I travelled on foot for three days and on the fourth arrived at Voi at one o'clock. It being a Monday, the train was due in from Mombasa at five o'clock. We set off at seven, travelled all night and got into Nairobi at noon the following day. There is no reason to tell you about this town for all that is recent history. Mr. Hollis gave me the job of writing everything I knew about the Masai: their customs, stories, and other such matters. I worked at his house on this for about three months.

One afternoon about three o'clock, two Europeans arrived at the house: one being Mr. Jackson, Commissioner of Nairobi who was called by the Masai *Lombala* meaning "one with scales over his eyes" referring to his spectacles. The other was Mr. Hobley, the Sub-Commissioner. Mr. Hollis invited them in and they sat around a table talking. Mr. Hobley's chair was so placed that he was facing the door of the room where I was working. Looking at me he saw that I was bending down writing. I think he noticed that my ears were pierced. I saw them get up from their chairs and they came over to the room where I was. I stood up, as is proper when greeting one's superiors, and said "How do you do" to them. They asked me only one question "What tribe are you?" to which I replied "I am a Masai." Thereupon they all went out for a walk.

When Mr. Hollis came back that night I had already gone to bed, but after breakfast the next day, he called me and said "Justin, did you know those Europeans who were here yesterday?" I replied "Yes, Sir." "They said they were very angry with me and asked me why I was hiding you in my house when the

Government was in great need of an interpreter at Laikipia Boma where Mr. Collier is in charge. They begged me to let you go there and I hope that you will not refuse, for if you do, they will say it is I who enticed you from going, so you will bring shame on me. Don't be frightened to accept as you will not find the job difficult and as for my work, you will have time to carry on with it because there will not always be Masai at the Boma but from time to time you will be wanted when Mr. Collier goes on safari. He does not travel very much because he has a weak chest. Tomorrow when those two Europeans come back to talk to you about this, I will not prevent you from asking anything you want or to reply if they say anything which you don't like."

The following day they arrived at the same hour and they called me to go to the place where my master was working. I was given a chair and sat down. Mr. Hobley asked me "What did Mr. Hollis tell you yesterday?" I replied "He told me no more than what you told him and my reply is this: I ask you to consider the distance between Taveta and Nairobi and now you ask me to go even farther afield!" Mr. Hobley replied "And I ask you to consider the distance between Europe and Africa. Isn't it even farther?" Didn't those two laugh! Mr. Jackson said "You had better admit that you are beaten for we see that he has got the better of you." I had no answer to that, so agreed to take on the job. Mr. Hobley said "Your master has asked that we wait for a week whilst you prepare for your journey. Meanwhile we will send for Laibon Lenana to come and we will send word to Mr. Collier to send his headmen to Naivasha where we can all meet." Mr. Hollis sent me to a Goan shop to be measured for a rain-coat, two pairs of trousers, and a jacket with arms, all of which came to sixty rupees. Three days later, the Laibon came and stayed at the station. I went to meet him. He was no stranger to me as I had been out to his place when I was collecting material from those who knew the ancient history of the Masai.

CHAPTER XVIII

MY LAIKIPIA SAFARI

When the appointed time for our journey arrived, we left Nairobi at about four o'clock and reached Naivasha that evening. Mr. Hobley was taking us and he went off to the Naivasha Boma whilst the Laibon and I stayed at the station. The train went off and we waited a couple of days for the Masai headmen to appear. When they arrived, they slept in a small Masai boma near the District Office. In the morning, they went to the Boma and we were called and there met two of the leading headmen—Ole Masikonde and Legelisho—with three junior headmen and three European officers. The officer in charge was called by the Masai Njiwaine, i.e. Mr. Ainsworth who was first posted at Machakos in Ukamba, and Mr. Hobley. I do not know who the third officer was. We started our *baraza* at nine o'clock. There were not many matters to discuss, but the headmen were told "We are sending this man (that was myself) to your country to work with Mr. Collier to help him as an interpreter." The Masai replied "We do not want him." They were asked "Why?" They replied "Perhaps he will show favouritism and cause us to fall out with you." They were told "We know for certain that this man is a Masai, although his habits are now like those of a European. But let's not pursue the matter further. You Masai can look for a man of your own who can speak and write Swahili and English. What do you

think of that, Laibon?" The Laibon replied "This man has lived with me a whole month writing the customs of the Masai and you will find him all right." Headman Legelisho said "If he is acceptable to the Laibon, how can we refuse him. We agree to his appointment." That was the end of the matter.

Next morning we set off on our journey, leaving Naivasha at nine o'clock. The usual way to Laikipia was to the north past Thomson's Falls but Mr. Hobley wanted to go near the mountain called "Kinyaa" (Kenya) so we set off eastward, passing through Kikuyu country. Emerging from here, we descended on to a broad plain between the Kikuyu and Mount Kenya. It was a long journey and on the seventh day we arrived at Lomuruti where we found Mr. Collier in camp. He had arrived three days previously and was waiting for us. I knew him of old for he had stayed at Taveta some time previously.

Here we slept and in the morning our departure was delayed because the Europeans liked to play like children chasing after ducks which were swimming in some shallow lakes nearby. In spite of this, we got off at nine-thirty and arrived at the Boma at noon. The Police of that station turned out under their European officer to greet us on the road with drums and trumpets. Mr. Collier returned the compliments and on arrival he inspected the Police.

From now on the Masai began to arrive and we could not take our eyes off them in their war dress. This was new to us never having seen such before. Mr. Collier gave them a couple of cattle which the moran ate that very evening. Headman Legelisho addressed them "This is a man whom we have been given to deal with our *shauris* at this Boma." They came up to greet me but some refused to shake my hand thinking I was still a *laioni*. This was not without reason, as to them I must have seemed a child in view of their height and weight.

After this, I got down to work and paid no attention to anything else. I want to tell you a bit about the name Laikipia. The people who bore this name were a large tribe. Their country extended from Mau to the place now called after them. They are not unlike the Masai and their language is Masai, but with many differences. They herded stock of every sort—cattle, camels and even horses. Their country abutted on that of a section of the Masai called Purko but these two did not get on well together—the Laikipia attacking the Purko till they were almost annihilated.

The Purko went to beg assistance from Laibon Subet, the father of Mbatian who lived in Kissongo. The Laibon ordered the Masai of Kissongo, Olkonerei, Kiteto and the whole of Sighirari as far as Kaputei to join in an attack on the Laikipia. It is said that on the day they set out on this war, a bull was slaughtered having a very thick hide. This was spread out and each man stepped on it. There were so many of them that before they had all passed over it, the hide was worn out. This raid was called the war of the Morijo. The Laikipia were completely beaten and many captured. Thus the Purko of today are only half Masai, many are descended from the Laikipia who were captured at that time. After this war, the Purko took over that country but the name of the original inhabitants remained. I travelled a great deal in that country and was even shown the grave of the Laikipia Laibon named Mosegha; even today the place is called *Engurare e Mosegha*, "The grave of Mosegha".

CHAPTER XIX

JUSTIN RETURNS HOME

I worked for exactly three years. I was then given permission to return home, but grudgingly since the locals did not want me to depart. I returned to Taveta where I lived without a job. At that time I began to remember that I myself was a Kwavi, so I left Taveta going in the direction of Mombo hoping to meet up with some of my relatives. At that time the whole country was at peace by virtue of European rule. Nobody raised a finger against his fellows. Arriving at Mombo, I met some Masai youths who were on a visit from Lushoto. I asked them "What are you doing at Lushoto?" They replied "We have now all come down from the hills and live at Mkalamo." At that time Mombo could not be seen for the number of people who were engaged on railway construction (18). I slept there and early next morning set off, I and another. About noon we arrived at a boma and met an elder whom I knew very well. We stopped and chatted with him, but he did not recognize me. I asked him "Long ago my Masai father told me that he had a friend amongst the Kwavi called Kivasis ole Morindo. Tell me, do you know him?" He replied "Yes, I knew him well. He died last year." I asked "Did he leave any children?" He replied "No, he did not leave any, as what profit is there in leaving girls only. Who shall carry on his line? He had one daughter who is married. She is in this very boma. His son was lost ages ago and he used to ask everyone whether he had heard of him, but he heard nothing until the time that he died of old age. Now there is no one to carry on his name." While he was talking, my eyes began to fill with tears. My poor old father, if I had only known, I would have come to see him for the last time. As the elder looked at me, he saw that my face was changing and it began to dawn on him who I was.

My companion kept quiet all the time. "Let me take you to the boma, for if only women are there, they will run away when they see you for you are wearing clothes like Police and that will frighten them greatly." His purpose of taking me there was doubtless to see if anyone would recognize me. We went to the boma and entered. We found the women sitting in the shade of a tree and, looking at them, I recognized my sister in the middle. The elder asked the women "Can you recognize these two Masai youths?" They all looked at us and one of them whom I recognized said "Ah, what shall I say, isn't this Sameni?"

My sister jumped up and threw herself down whilst I was trembling and could say nothing. About two o'clock in the afternoon, my brother-in-law came in from herding and he recognized me without hesitation and came up and greeted me. They all said that the name which was lost has now come to life again. I stayed there for a month and got to know my tribe again. I promised my sister "Don't be worried if I go away again. I shall certainly return now that I have seen my own home."

I returned to Taveta and told my wife everything that I had seen on my safari. All the time I had been on safari a letter had been waiting for me written by Dr. Hulbert of the Africa Inland Mission who lived at Kijabe beyond Nairobi. When he heard that I had left my job as interpreter at Laikipia, as we had met once or twice in the past, he wanted me to join him as a teacher. At that time I was keen to see that country, so I sent him an acceptance. He replied by sending me the necessary fare and I was indeed glad when I went and met him.

He was certainly in need of help because he had forty children with only one teacher—a European called Miss Holmes. Three languages were being spoken, Kikuyu, Kamba, and English; of these I knew a little English and some Kamba. After stumbling along for five months, I got to know Kikuyu as it is not unlike Kamba. Swahili was not used here, only these three languages. I carried on with my job there for a year. I had three teachers under me and they were very good. I saw that the people here were nice folk, especially when they had been taught by Europeans.

Whilst I was there, I had the good luck to meet a very important person, Mr. Roosevelt, the President of America, who came to visit Dr. Hulbert whilst on holiday. (19). We went to sing to him in English and he praised us greatly. We sang three quartets. He entertained us by singing two Nubi songs. After I had worked for two years there, I asked leave to return home. If it had been at all possible, they would not have let me go for they did not know what to do but they saw that it was only fair that I should go, especially because of my children. Leaving Kijabe I did not tarry on the way but hurried on to Taveta where I spent a month taking leave of my friends who were like brothers since I had been brought up with them. I then departed with my wife and two children. I think this was in 1911. I returned to Kwavi country where I had been born, thus fulfilling the promise which I had made to my sister that I would come back and live with her. Now we are old and have our sons and daughters around us. God be praised.

NOTES

(12) The Ven. J. E. Hamshere was the father of the present Headmaster of the Arusha School. He came out as a C.M.S. Missionary in 1893 and spent much of his time at the Divinity School, Freretown (Kisauni). He was an expert on the Mombasa dialect of Kiswahili, and did considerable translation work. He did much safari work, and walked from Mombasa to Taveta and the Pare Mountains.

After holding the appointment of Archdeacon of Mombasa for a number of years, he was transferred to Kongwa in 1926 to open the Clergy Training College there. He retired from C.M.S. in 1930, and after being Vicar of Mark Cross, near Tunbridge Wells until 1948, he retired from his parish and died in Devon in 1952 at the age of 85.

(13) This is the one occasion when Justin got his dates wrong. The Boer War was fought from 11th October, 1899 to June, 1902. Lord Kitchener sailed to South Africa in September, 1899 and departed thence for India in 1902.

(14) Justin's chronology is confirmed by the standard history books which show the Arab Rebellion as breaking out in 1895 and lasting for about ten months.

(15) Bishop Hannington was murdered in October 1895; Buganda was not pacified till 1899, when Mwanga was deported to the Seychelles where he died in 1903. Daudi Chwa was born in 1896.

(16) The mauling of Mr. Whitehead has been fully described by Col. Patterson in his classic *The Man-eaters of Tsavo*.

(17) This is of course Sir Claud Hollis, G.C.M.G., who was appointed Assistant Collector in the East African Protectorate, as it then was, in 1897 at the age of twenty-three. He became Collector—corresponding to District Commissioner—in 1900 and served in Nairobi from 1902 to 1912 first as Secretary and then as Secretary for Native Affairs. It was during this period that he published his works on the Masai and the Nandi, still regarded as standard works. He then transferred to Sierra Leone but returned to East Africa as Secretary to the Provisional Administration and thereafter Chief Secretary, from 1916 to 1924. After serving as Resident of Zanzibar, 1924 to 1930, he was appointed Governor of Trinidad and Tobago, from which office he retired in 1936.

(18) C. Gillman in *A Short History of the Tanganyika Railways. Tanganyika Notes and Records* No. 13 records that the line to Mombo was opened on 24th February, 1905. There construction halted for some time, but recommencing in 1907, the line reached Bwiko in 1909 and Moshi in October 1911.

(19) Reference books confirm that President Roosevelt left the United States for East Africa on 23rd September, 1909. After travelling and hunting in Kenya, he returned home by the Nile route.

CHRONOLOGY

Year	*Age*	*Event*
c. 1878	–	Sameni (Justin) born at Mandala near Lushoto.
c. 1885	7	Captured by but escapes from the Masai.
c. 1886	8	Taken before Chief Semboja of the Sambaa as a thief.
c. 1887	9	Goes to live with the Masai.
1890	12	Rinderpest kills off the cattle and Justin runs away to Chaggaland.
1891	13	Justin goes to school.
1893	15	The school moves from Moshi back to Taveta. Justin baptised at Taveta 2nd April, and then goes to the Coast.
1894	16	Justin returns to Taveta as a teacher.
1895	17	Confirmed by Bishop Tucker, returns to the Coast and witnesses the Arab rebellion.
1897	19	Returns to Taveta and marries 7th September.
1898	20	First child born 15th August; leaves the Mission.
1900	22	First meets Mr. Hollis at Mombasa and goes to Nairobi and then on the Laikipia safari.
1903	25	Resigns and returns to Mombo.
1909	31	Returns to work for African Inland Mission and sees President T. Roosevelt.
1911	33	Returns to Kwavi country and assists the Laibon in administration.
1914–18	36–40	Remains in Kwavi during World War I.
1923	45	Takes over as Headman, Same District Office opened.
1939–45	62–67	Stays at home during World War II.
1947	69	Resigns from post as Kwavi Headman.
1951	73	Writes his Life.
1954	76	Died on 23rd June.

MINING AND MINERALS IN TANGANYIKA

A talk by Mr. J. Spalding, Mining Consultant to the Tanganyika Government, given to the Tanganyika Society on November 8th, 1955

In the early years after the war a great fuss was made in the press about the terrific mineral possibilities of Tanganyika, and a great deal of interest was shown by big mining houses. Some of these installed permanent representatives in the Territory or in East Africa, whose chief job was to keep an ear to the ground so that they could snap up for their firms any mineral discoveries that were made.

It was soon realized, however, that Tanganyika was not as rich as that earlier propaganda had made out, and mining in Tanganyika was no longer news with a capital M in the world's newspapers. That was the opposite swing of the pendulum.

The fact is that Tanganyika is not unduly rich in minerals, but it is certainly not poor in them either. Apart from a recession in the later war years caused by the lack of priorities given to gold mining, the products of the mineral industry of the Territory have increased steadily during the past twenty-five years Since 1947 the rate of increase has been augmented, rising from one and a quarter millions in that year to, we anticipate, well over five millions this year; and I believe that this upward trend will continue.

Before the war gold was the most important mineral produced, but the gold mining industry suffered a severe knock during the war years, and of recent years half the value of Tanganyika's minerals has come from diamonds, and from a single mine, the Williamson Diamond Mine. In the future, however, it is probable that other minerals will become of increasing relative importance.

In the middle of this year the new plant at the Mpanda lead mine came into production, so that for the second half of this year we have a big increase in the value of lead produced. Next year it is reasonable to expect a considerable increase over this year's production.

Soon the enormous new plant at Williamson's will start up. This plant is expected to treat about six times as much ore as his previous plant, but we must not expect an equivalent increase in the value of the production.

The object of the new plant is to enable ground of lower grade to be worked, of which there is a large tonnage available. The result will be that although so much more ground will be treated in the future a spectacular increase in the number of diamonds produced must not be expected. There is bound to be some increase in the value of the output, of course, but nothing like in proportion to the tonnage treated.

I should like to digress here for a while and explain to you about this question of high-grading and low-grading. A deposit of valuable mineral—diamonds, gold, tin, or what you will—is not consistent throughout. There will be patches or zones of very rich material, surrounded by larger zones of medium-grade stuff, which are in turn surrounded by large volumes of low-grade but still payable ore. Outside this again is yet lower-grade material which is beyond the margin of payability.

Now there are several ways you can tackle such a deposit—you can do what most small-workers do, wade into the rich stuff, treating only a small tonnage by hand methods, which is, of course, expensive working; and close down when the rich stuff is finished. This is called high-grading or sometimes "picking out the eyes". The alternative is to raise capital, and to put in a plant to treat a much bigger tonnage at a lower cost per ton, and this enables the operator to work lower grade ore. He therefore mines out the whole deposit, mixing the high- and the low-grade stuff together, so as to keep the output reasonably regular.

By high-grading, the medium- and the low-grade ore are usually lost for good, as when the high-grade stuff is gone, they are not worth working alone; while by low-grade working all the ore is eventually won. This does not mean that high-grading is wrong—in many cases it is the only policy possible, because it is not worth putting in a plant to treat a big tonnage cheaply, unless there is enough ore to keep it going for a reasonable number of years. Very many deposits, such as the small gold reefs in the Lupa and Musoma areas were like this—they had some very rich zones, but the lower-grade stuff surrounding them was insufficient in quantity to warrant the costs of the larger plant which would be necessary to treat them.

It is one of the most important jobs of the mining engineer to decide just what size of mine would be most profitable—how many tons he should treat in a day—should he make it a little high-grade mine with a small capital; should he have a big show with a large plant to treat all the low-grade ore; or something in between.

Many mines start as high-grade mines; then, as more is learnt of the deposit, the possibility of low-grading is realized, capital is raised, more plant is installed, and the policy of mining is changed. Dr. Williamson has already increased his plant three times, each time treating a larger tonnage; and in my opinion the end is not yet reached.

The amount of capital expenditure required to bring mines to production in these days is shattering. On the Mpanda Mine over two million pounds was spent before production was reached, and that is for an ore requiring only a very simple treatment. Dr. Williamson's new plant with its allied services has cost double that—about four million pounds in all. This, of course, is to treat a very big tonnage. The Kilembe Mine in Uganda, which is to produce copper and cobalt, is still more costly, but in this case the plant required is much more elaborate. The total capital which will be required to bring that mine into production will be of the order of six million pounds.

What on earth, you may ask, can so much money be spent on? Let me try and give you an idea. Suppose a new deposit is discovered in the bush, and is taken up by a big company. Before they can do anything else, they must examine the deposit more thoroughly to see what they have got—how much ore, and how much valuable mineral is in it. This means bringing in diamond drills to drill deep holes to strike the deposit away below the surface, and to bring up samples for examination; and mining equipment to start tunnelling underground in order to get a still better idea.

But before this can be done, an all-weather road to the place is essential. Then the people working on the job need accommodation. Temporary houses have to be built and a water supply found.

Suppose this testing shows that the deposit is worth working on a large scale. The underground workings have then to be extended and equipped so that when the starting date arrives, a steady flow of perhaps a thousand tons of broken ore a day may be supplied for years on end without any possibility of interruption. Meanwhile a treatment plant must be designed, purchased overseas, brought into the country and erected—a plant which will have to crush this 1,000 tons of ore a day to powder, and to extract from it by one means or another the valuable constituent.

All these things require much power, and so a power station has to be erected. Williamson's power station when completed will have an installed capacity of nearly 10,000 k.w., roughly equal to the present capacity of the Dar es Salaam station. The installed capacity at the Mpanda Mine is 6,000 k.w.

That is by no means all—not the least of the expenses is the provision of a town for the employees—houses for 50 to 100 Europeans and perhaps 2,000 Africans, together with the necessary roads, water reticulation, electric supplies, amenities, etc. Finally for a big mine the company usually finds that it pays to build a landing strip.

That may give you some idea of where the money goes, and do not forget that the whole thing is dependent on the mineral deposit lying concealed in the ground, and on the mining engineers having correctly estimated its worth.

Let me go back now to talking of the future of mining in Tanganyika, after which I will give you some details of the various mines and of the minerals they produce. We have seen that increased outputs are coming or are about to come from Mpanda and Williamson's. In a year or so we hope to see some production of niobium from the Mbeya Pyrochlore Deposit, and if all goes well, a further expansion there should make a big addition to the value of the territory's mineral exports.

Meanwhile the gold-mining industry is looking up, in spite of the disadvantage of a fixed gold price in comparison with rising prices for everything else. The output of the Geita gold mine is very slowly but steadily increasing and I anticipate that it will continue to do so.

Then there is the new Kiabakari gold mine, which deposit is at present being examined. This is a low-grade mine and whether it will be operated or not depends on whether sufficient ore can be proved to warrant the cost of a plant big enough to treat profitably oré of this grade. We expect to hear of the company's decision about this very shortly. If they decide to exploit the deposit then we can expect an extra output possibly equal to two-thirds of that of the Geita mine.

The less important minerals produced in Tanganyika—mica, tin, tungsten, etc.—are not likely to contribute much to the expected increase in the mineral revenues, though there are distinct possibilities that the Kyerwa tin mine, which has been working in a small way for many years, may yet turn out to be something fairly big.

These are the short term expectancies.

There are very good chances that more base metal deposits may be discovered in the Western Province, or elsewhere, but the chief hope of the future probably lies in the rarer metals which have only recently come into demand, and the very names of which are strange to most people—niobium (or columbium as the

Americans call it), cerium, zirconium, hafnium, thorium, uranium, etc. Large areas of Tanganyika have already been prospected for gold and base metals, first by lone prospectors, and later by teams of geologists working for private companies and for Government; but for many of these rare minerals the whole country is virtually unprospected, because none of the prospectors anticipated a demand for these things or even knew what they looked like.

Since these are rare minerals, deposits of them will be either very small or of extremely low-grade, so the search for them will be long and difficult. Moreover the profitable extraction of the metal from the ultra-low grade ores is likely to be a major problem.

Several large deposits of niobium have, however, already been discovered by the Geological Department in Tanganyika, and two have been taken up by large companies—the Mbeya Pyrochlore, which is already being tested; and the Ngualla deposit in the Lake Rukwa area on which preliminary work has just been started. If these come to successful exploitation, others will doubtless be taken up.

Of the other rare minerals which may be found nothing definite is known, but I think it probable that one or more may exist in valuable deposits in the territory. Already reports have come in of occurrences of cerium and zirconium, and even of the gas helium, and these will have to be followed up.

Finally, in the background lie the already-known deposits of coal, iron and titanium. Tanganyika is well provided with coal, but it is all in the wrong places, far from any system of communications. The coal will certainly be worked one day—it is merely a question of the opening up of the country and the provision of railways. The articles in the popular press saying that coal is doomed and will shortly be ousted by atomic power, I consider very premature. The cost and size of atomic power plants is great, and when they have been shown to be economic in Britain, every country in the world will be screaming for them. Countries like Tanganyika, will, I think, be very far down the list of those wanting supplies of atomic power stations. Moreover while atomic energy can possibly compete with the cost of coal in Britain, it does not mean that it will be economic to use it in Tanganyika where it is hoped that the price of coal at the pits will be a quarter of the British pit-head price. Nevertheless it would be sound policy to get our coal into production as soon as we can—it would add to the country's revenues, decrease imports of oil, and make us much less dependent on the outside world. In the ground the coal is worthless, in production it means increased circulation of money.

Close to the Ruhuhu coalfields beyond Songea, lie the big deposits of titaniferous iron ore at Liganga. When a railway is built to the coal there is little doubt but that these deposits will be mined for the production of steel and of ferro-titanium, an alloy which is in considerable demand.

So, when we have found all the valuable minerals that are to be found in the territory, or probably long before then, the revenue of the mining industry is due to get another big boost from the coal and iron. These are the reasons why I consider that the present steady rate of increase in the value of mining which is now taking place in Tanganyika will be maintained for a considerable period.

Now I will give you a brief description of a few of the larger mines and of the minerals they produce. As Williamson is the biggest producer in Tanganyika let us take diamonds first. Diamonds are formed in molten magna at very high temperatures and pressures, such as are only found deep in the earth. There they are quite inaccessible to us, but occasionally nature has helped by bringing them up to surface in a volcanic eruption.

The molten rock is squeezed up a fissure and ejected at surface forming a volcano. The flow of this hot stuff soon scours the fissure out to a pipe-like shape. Later, it all cools down, geological eras pass, and the volcanic cone and the extruded lavas are all eroded away; but the pipe up which they came remains filled with solidified lava. When this is of the type known as kimberlite it is possible that it may contain diamonds.

When the cone and the part of the pipe within it were being eroded away, the lighter and softer materials were ground up and carried off by wind and water, while the heavier and harder minerals were left behind. Thus, lying on top of the truncated pipe, or in pre-existing valleys leading from it, are often found gravels containing these harder minerals. If diamonds were in the kimberlite of the pipe, we should expect to find them concentrated in these overlying gravels, and this is the way they occur at Williamson's.

There is a large pipe, over half a mile in diameter, and overlying it are thick beds of gravels which in places go over twenty-five feet deep. The present plant is working gravels only and there are many years of these available before it will be necessary to turn attention to the pipe.

The gravels contain on the average about one part in a hundred million parts of waste. When you consider this figure it is not surprising that a plant to treat 7,000 tons of gravel a day is required.

The diamonds found are roughly half gems and half industrials, that is—flawed or discoloured stones which are used in cutting tools, diamond drills, grinding wheels, grinding powders, etc. The industrial stones fetch about £3 a carat; while the gems usually bring in well over £15 a carat in their raw state. Cutting, of course, greatly reduces their size but quadruples their value.

Next in order of present importance is the Mpanda lead mine of Uruwira Minerals Ltd. This mine, which produces copper, gold and silver as well as lead, took an inordinate time to get into production, chiefly owing to the difficulty in raising capital for a lead mine, lead being a mineral for which the price was then somewhat uncertain. Early in 1954, however, the price of lead started to rise and for the past twelve months has remained steady at a reasonably high figure. The price of copper has also improved greatly.

Finance for the exploitation of the deposit was finally obtained by loans from the American and Tanganyika Governments. The loan from the Americans is to be repaid in metal during the first three years of production.

Prospecting over highly mineralized areas in the same neighbourhood, is a company called the Katuma Mining Ltd., which is a subsidiary of the Patino group. At the moment they are testing a potential lead deposit by diamond drilling. Meanwhile, further afield the Anglo-American Corporation are preparing to prospect in a big way.

Prospecting in the Western Province is a very expensive job owing to the lack of communications, the tsetse flies, and the lack, in many of the interesting areas, of any population. This makes prospecting extremely difficult, but it is much less of a handicap to the building up of a mine once the deposit has been found. Twenty years ago, for instance, Geita and Mpanda, now the centres of thriving districts, consisted of wild uninhabitated bush, haunted by tsetse flies. Geita is now a resettlement area, and Mpanda is the focus of a community of 25,000 settlers whose production of maize in the last harvest was over 5,000 tons.

That is what mining does for a country—it opens it up and domesticates it—for the development of a new country it is more important than any other industry, possibly more important than all other industries put together.

Next in importance is the Geita Gold Mining Company. This company owns a number of low-grade gold mines, spread over eight miles of hilly country—they are the Lone Cone, Geita, North-East Extension, Prospect 30, and Ridge 8 Mines. The company have also recently acquired exclusive prospecting rights over contiguous areas, and the prospect of finding more deposits in these is bright.

New Consolidated Goldfields, one of the big mining houses, are managers for the Geita Company, and they have also taken a financial interest. At present only the Geita and Prospect 30 Mines are producing, but development of the others is proceeding. It is hoped that these developments will warrant the erection of a second treatment plant equal in size to the present one.

The Kyerwa Syndicate which has been working a tin mine on a small scale for many years has been acquired by the Straits Trading Company, who operate in Malaya. In order to devote all their energies properly to testing the large but low-grade deposits on the property the Company have temporarily stopped production. It is hoped that the results of their investigations will mean another big mine for Tanganyika.

Now we come to the pyrochlore deposits, and the first question is, "What is this stuff pyrochlore?" Niobium, which the Americans call columbium, is a metal which is very useful for adding to steel to make alloys for special purposes. Added to stainless steel it improves the resistance to corrosion, especially at high temperatures. Its chief use, however, is to make special steels designed to work at very high temperatures indeed, such as are found in jet engines.

Owing to a world shortage all sorts of other metals have been tried in its place, but none has been so successful as niobium. During the shortage, concentrates containing this metal fetched fantastic prices, over £2,000 a ton, but already supply has caught up with demand and the price has fallen a lot, and will fall further. It is anticipated, however, that the much lower price will stimulate the demand, and so we have hopes that Tanganyika will be able to produce and sell large quantities of this stuff.

The form in which niobium occurs here is in a mineral called pyrochlore, which is found in volcanic pipes, just as diamonds are, though the pyrochlore pipes consist of a quite different rock—a kind of limestone called carbonatite.

As soon as the possibilities of pyrochlore were realized, our Geological Department, with, what I consider, great enterprise, started a search for these carbonatite deposits. Often the ancient volcanoes can be spotted from the air by reason of their circular shape, even though the cones have been completely eroded away and the place covered by forest. So by very close scrutiny of aerial photographs followed by investigation on the ground, many carbonatite plugs were found.

That near Mbeya had large crystals of pyrochlore visible in it, in addition to being easily accessible, and the department proceeded to investigate it more fully. Their investigations were successful and the deposit was put out for tender, and of the applicants the Billiton Company were chosen. They have formed the Mbeya Exploration Company with the Colonial Development Corporation as partners.

The Company are now further testing this very large deposit, and at the same time working out a method of treatment. They have a small but quite elaborate pilot plant already in operation, and it is hoped that in a few months sufficient will have been learned to justify the erection of a much larger pilot plant which will also give some production. If all went well this would probably be followed by a plant to treat some thousands of tons of ore a day.

Such a plant would require a lot of power to work it, so, associated with the testing of the pyrochlore deposit, is the examination of the nearby Kiwira-Songwe coalfields. There is a small local demand for coal, and a larger potential one for the railways in Nyasaland; so, if the pyrochlore goes ahead, it is likely to be associated with a new coal-mining industry.

Meanwhile, the next pyrochlore deposit to be tested is that at Ngualla, which lies in very inaccessible country east of Lake Rukwa. The Anglo-American Corporation have applied for an exclusive prospecting licence over this deposit, and have just completed making about thirty miles of road to it. It again is in tsetse country, so the early work will be slow and difficult. Should a mine be established here, communications will have to be opened up, and another section of hitherto useless country will be opened for settlement.

Mining brings great benefits to a country like Tanganyika—it provides valuable exports, often to dollar countries; it provides employment and puts money into circulation; it forces the development of communications; and opens up new country for settlement, and new markets for produce.

There is just one necessity before all these benefits can be won, that is, the provision of the necessary capital. Since the large sums necessary are not available within the territory, they must come from without; and there, as the Royal Commission on East Africa stated, Tanganyika has to compete for its capital with the rest of the world. We must be careful to see therefore that the fiscal and other deterrents to capital investment are at least not greater in Tanganyika than in other countries, and preferably that they are less.

In conclusion, I should like to thank the Commissioner of Mines, Mr. V. T. Hockin, for his assistance in the preparation of this talk.

Correspondence

Dear Sir,

While preparing a note on the S.S. *Präsident*, the German East Africa liner which served as a supply ship to the German light cruiser *Koenigsberg* during World War 1, I recently came across the very interesting article by G. W. Hatchell in the January 1954 number of *Tanganyika Notes and Records*, entitled "Maritime Relics of the 1914-18 War", in which reference is made to these vessels. The author suggests that the wreck of the *Präsident* is still lying in the Lukuledi River (or creek) near Lindi. but later quotes Mr. A. Atkins, a resident of Lindi for many years, who supplied the author with a good deal of interesting information concerning the *Präsident* as stating that she was later repaired by means of cement boxes and towed out, but that her subsequent fate was uncertain.

As the wreck of the *Präsident* is not lying off the East African coast, and I am able to take the story up where it was left off by Mr. Atkins, I am writing you this letter, in the hope that your readers may find it of some interest.

After the *Präsident* was raised from the Lukuledi River she was towed to Durban—by whom I have been unable to ascertain. Thereafter she was purchased by the well-known South African trawling firm of Irvin & Johnson Ltd., which eventually had her towed with a cargo of coal to Saldanha Bay (on the West Coast, 65 miles north of Cape Town), where she lay for several years. The coal was intended for use in the nearby whaling station. Eventually, about 1928, she was sold for £500 (the auction being held on the Parade at Cape Town) to a syndicate, which had her beached up against the steep limestone cliff in Hoedjes Bay, at the northern end of Saldanha Bay. After passing through various hands and being finally sold in execution for something like £100, the hulk was about 1935 cut up for scrap, the steel sheets being railed to Pretoria for smelting. All that was left was the keel and the few feet of hull immediately above, and this was later filled in with earth to form a rough landing stage. Still later, during World War II, the Royal Navy improved the surface with cement, and used the jetty so made for working on the boom defence nets and also to provide landing facilities for the naval establishment which had in the meantime been set up at the top of the cliff. The buildings then erected, and others more recently added, today form the South African Naval Gymnasium (S.A.S. Saldanha) and the jetty—still known as "the Präsident Jetty", and with the remains of the bow and stern of the old ship still clearly projecting from each end of the concrete slab—is used for all the small boats of the establishment.

Yours faithfully,

S. J. Levin.

Dear Sir,

re: THE CHAGGA TRUST.

The above Trust under the Chairmanship of Mr. A. L. B. Bennett, O. B. E., D.F.C., "Mbuya-ya Wachagga" has been formed with the object of recording the history, customs, rites, ceremonies and language of the Chagga, and to safeguard places of historical interest.

An investigating committee has been set up, and they have requested that your assistance be sought in obtaining the use of any information which may be in your possession, and in enlisting the support of any of the members of the Tanganyika Society who may have material which would be useful.

I should be very grateful for any assistance you can give in giving publicity to these aims.

Thanking you,

Yours faithfully,

Sgd. MAREALLE II

MANGI MKUU OF THE WACHAGGA

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Archaeology in East Africa... ... ... *By Sir Mortimer Wheeler, C.I.E., M.C., F.B.A.P.S.A.*

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THE TANGANYIKA SOCIETY

LIST OF SEPARATES

Mikindani Bay Before 1885	*Sir John Gray* ...
Notes on the History of the Wasegeju	*E. C. Baker, O.B.E.* ...
Maji Maji Rebellion in the Liwale District ...	*R. M. Bell* ... ...
Notes on the Fipa	*G. D. Popplewell* ...
Problem of Controlling Bilharzia Infection ...	*F. G. Cawston, M.D.*
Ornithology in Tanganyika	*R. E. Moreau* ...
A Journey by Land from Tete to Kilwa ...	*Sir John Gray* ...
Angoni Raids in the Rufiji District	*R. de Z. Hall* ...
Angoni of Tanganyika Territory	*G. W. Hatchell* ...
Kondoa Sites: Where they are and how to get there	*H. A. Fosbrooke* ...
List of Sites in Kondoa District	*H. A. Fosbrooke* ...
Rock Engravings and Petroglyphs	*H. A. Fosbrooke* ...
The Age and Meaning of the Paintings ...	*H. A. Fosbrooke* ...
Paintings in Districts Other than Kondoa ...	*H. A. Fosbrooke* ...
Methods of Preservation and Reproduction ...	*H. A. Fosbrooke* ...
A Brief Review of Archaeological Remains in Tanganyika	*H. A. Fosbrooke* ...
Some Rock Paintings more fully described ...	*Jane Fosbrooke* ...
An Artistic Appreciation of the Kondoa Rock Paintings	*Phyllis Ginner* ...
Water in Masailand	*F. H. Page-Jones* ...
Tenzi	*J. W. T. Allen* ...
The Pain of Individualism	*T. M. Revington* ...
Notes on the Waikiyu and Wasizaki of Musoma	*E. C. Baker* ... ...
The Origin of Limestone Caves with Special Reference to those of Cheddar and Amboni...	*J. R. Harpum* ...
A Visit to the Island of Godziba in Lake Victoria	*J. E. S. Griffiths* ...
Mens Sana	*K. A. Dobson* ...
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Rezende's Description of East Africa	*Sir John Gray* ...
The Kindiga	*B. Cooper* ... ...
Stanley's First and Second Expedition through Mpwapwa and W. L. Farquhar's Grave ...	*T. Griffith-Jones* ...
Tanganyika Arrow Poisons	*W. D. Raymond* ...
Some Stone-Built Defences on Ukerewe Island...	*T. H. E. Jackson* ...
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Plain Thoughts on African Education	*J. M. Winterbottom* ...
Some Aspects of Dhow Building	*P. H. Johnston* ...
An Early Sleeping Sickness Settlement in S.W. Tanganyika	*C. W. Hatchell* ...
Rhapta	*J. W. T. Allen* ...
Voyage de Marseille au Lac Tanganyika en 1902 via Mozambique et Lac Nyasa	*Sister Rose* ... ...
San Rafael	*R. E. Moreau* ...
Anti-Locust Measures Memoirs	*R. C. Jerrard* ...
A Story of the Origin of the Name Bandar-es Salaam, which in the old days was called Mzizima	*M. Hartnoll* ... ...
Stories of the Wangindo	*C. J. P. Ionides* ...
The Kionga Triangle	*H. B. Thomas* ...
How the Wadoe got their Name	*A. M. B. Mtawa* ...
Notes on the Coinage of German East Africa	*P. J. du Toit* ... ...
Some Lakes and Waterfalls of Central and Western Tanganyika	*Capt. C. H. N. Grant*
Climbing Oldonyo L'Engai	*N. G. Guest* ... ...
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A Note on some Ruins near Bagamoyo ...	*N. Forster* ... ...
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Some Sukuma Bird Names	*C. Whybrow* ... ...
How the Swahili People and Language came into existence	*R. Reusch* ... ...
A Sandawe Climbing Rope	*G. Hunter* ... ...
A Note on the Handeni Museum	*T. R. Sadleir* ... ...
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Arabic Script of Students of Swahili	*J. W. T. Allen* ...
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Spoon Fishing in Mafia	*D. W. I. Piggott* ...
A History of Africa	
Refugees in Tanganyika during the 2nd World War	*A. L. Pennington, C.B.E.*
Some Hints on Climbing Masai Mountains ...	*H. F. I. Elliott, O.B.E.*
Mollusca of North-East Tanganyika	*Bernard Verdcourt* ...
The Struggle of Mombasa for its Freedom ...	*R. Reusch* ... ...
Birds of Cultivation and Townships	*N. R. Fuggles-Couchman* ... ...
Nairuzi or Siku ya Mwaka	

TANGANYIKA SOCIETY

Receipts and Payments Account

1st January, 1955 to 30th June, 1955

Receipts	Shs. cts.	Shs. cts.	*Payments*	Shs. cts.
Subscriptions:			Bank Overdraft 1.1.55 ...	2,330 01
Current	9,819 60		Due to Secretary 1.1.55 ...	234 92
Arrears	1,400 14		Printing Costs	13,199 75
Advance	380 00	11,599 74	Postage and Telephone ...	434 70
			Stationery	285 00
Sale of Publications		2,695 85	Purchase of Back Numbers ...	410 00
Donations		64 27	Bank Charges...	114 85
Advertising		800 00	Miscellaneous (hire of hall and	
Life Membership		—	films, etc.)	292 20
Government Loan Received		5,000 00	Advertising	333 65
P.O.S.B. Account Realized ...		4,501 41	Secretarial Fee (6 months) ...	1,200 00
			Balance in Bank 30.6.55 ...	5,826 19
		24,661 27	Shs.	24,661 27

The above account has been prepared in audit and I certify that, to the best of my knowledge and belief and so far as can be ascertained from the scant information at my disposal and the incomplete nature of the records available, it is correct.

5th September, 1956.

C. W. Hodges,
Director of Audit

W. Wheldon Wright,
Secretary/Treasurer

TANGANYIKA SOCIETY

Receipts and Payments Accounts

1st July to 31st December, 1955

Receipts	Shs. cts.	*Payments*	Shs. cts.
To Bank Balance as on 1st July ...	5,826 19	By Printing Costs T.N.R. Nos. 38 and	
„ Current Subscriptions (1955) ...	3,712 48	39...	5,031 00
„ Subscriptions paid in arrears ...	939 50	„ Bulk Postage T.N.R. Nos. 38, 39	
„ Subscriptions paid in advance ...	393 80	and 40	447 65
„ Life Membership...	1,000 50	„ Cost of Blocks	411 75
„ Donations...	1,155 00	„ Stationery	518 62
„ Sales of Journals and Separates ...	1,539 30	„ Purchase of Back Numbers of	
„ Advertisements	460 00	T.N.R.	433 40
		„ Honorarium Secretary/Treasurer	1,000 00
		„ Bank Charges	72 58
		„ Miscellaneous (Hire of Hall, etc.)	202 45
		„ Postage (Routine Correspondence)	304 60
		„ Balance	6,604 72
Shs.	15,026 77	Shs.	15,026 77

Bank Reconciliation Statement—31st December, 1955:

Balance per Bank Statement	Shs. 6,353 27		
Balance per Receipts and Payments Account	—	...	Shs. 6,604 72
Add Cash in hand in Petty Cash	66 45		
Add Cash balance carried forward in Cash Book	185 00		
	Shs. 6,604 72	...	Shs. 6,604 72

I have examined the above Account. I have obtained all the information and explanations that I have required and I certify as a result of this audit, that in my opinion the Account is correct.

29th August, 1956.

C. W. Hodges,
Director of Audit

M. Clifford,
Honorary Treasurer

THE TANGANYIKA SOCIETY

Treasurer's Report

Whilst considerable headway was made during the year in collecting arrears of subscriptions, dating back in some cases to 1952, at the close of the year the Society was owed arrears amounting to some Shs. 1,760/- and in addition Shs. 1,040/- was due from advertisers and purchasers of Journals.

2. Owing to editorial and printing delays only three issues of the Journal were made by the end of December and the printing costs of Journal No. 40 and also those of No. 41, which has yet to issue, amounting in all to approximately Shs. 5,000/- should be deducted from the balance shown in order to give a true picture of the Society's financial position as at 31st December, 1955.

3. The Society has a considerable amount of money tied up in stocks of Journals and "Separates". The face value of stock of Journals from No. 1 to No. 40 held on 31st December, 1955 amounted to Shs. 19,221/50. Sales, however, are relatively slow and come to about Shs. 1,500 per annum. The stock of "Separates" has been nominally valued by the Committee at Shs. 20/-. It should be noted, however, that the actual selling prices of the "Separates" range from 20 cents to Shs. 5/- each.

4. The first instalment (Shs. 1,250/-) in repayment of the Government loan was paid on 1st January, 1956.

Mary Clifford,
Honorary Secretary/Treasurer

THE TANGANYIKA SOCIETY

Annual Report of the Committee for 1955

The Society has suffered grievous loss by the deaths of Sir Mark Wilson who was a Founder Member, Mr. Anjaria, Member of the Committee and Mr. C. M. H. Jackson who had supported the Society for many years.

Officers and Committee:

There have been a number of changes since the last Annual General Meeting. The following Members of the Committee resigned upon their departure on long leave:—

Mr. C. de N. Hill,
Mr. B. Ronaldson,
Mr. R. Ellison,
Mrs. Organ.

The following were co-opted to replace them:—

Mr. N. M. Sadikot,
Mrs. Ginner,
Mr. A. D. B. Wylie.

The Committee appointed Mr. W. Wenban-Smith to act as Vice-President in the absence of the President on leave and the Vice-President on safari.

Mr. Wheldon Wright resigned as Secretary/Treasurer at the end of June, 1955 and was replaced by Mrs. Clifford.

Miss Risley, the Honorary Editor, resigned at the end of 1955 and was replaced in June, 1956 by Mrs. Paterson, Honorary Editor and Mrs. Leslie, Honorary Assistant Editor.

Committee Meetings:

The Committee met eight times during the year.

Meetings of the Society:

Members and their friends in Dar es Salaam attended the following lectures and films during the year:—

February 8th: Programme of Films:—
Land of Zinj.
Many Hands Make Light Work.
The Hehe Skull.

March 15th: Mr. Barclay Leechman, C.M.G., O.B.E., on Tanganyika National Parks.

June 14th: Mr. J. R. P. Soper on Gardening in Tanganyika.

July 14th: Edgar Queeny's film—The Life of the Masai.

September 13th: Mr. N. G. B. Guy on Maps and Map Reading.

October 11th: Mr. H. F. I. Elliott on Birds of Tanganyika.

November 8th: Mr. J. Spalding on Mines and Mining in Tanganyika.

December 13th: Mr. G. S. P. Freeman-Grenville on Coins Found on the East African Coast.

Membership:

With a view to increasing the membership the Secretary has written to the following:—All Administrative Officers in the Territory who are not already members and to all other Government officials who have entered the Territory from 1st January, 1955—31st December, 1955.

Increase in membership for the year totalled 62 Ordinary Members and 5 Life Members. There were very few resignations, but 38 names have been crossed off the Society's books as they have not paid their subscriptions for several years despite many reminders.

The Society has 43 Exchange Members; the Journals and Magazines exchanged are kept in the Museum Library.

Complimentary Copies of the Journals are sent to: The British Museum and the Bodleian Library.

Special General Meetings:

There were Special General Meetings on 14th June, 1955 and 13th December, 1955 to review the financial position of the Society. The Minutes of these meetings have been circulated.

Publications of "Tanganyika Notes and Records":

Three issues of the Journal were published during 1955 in August, October and December. These were the first three of the four issues for the year. The fourth is in the hands of the Printer.

Finances:

A successful drive for payment of arrears of subscriptions made it possible to pay the first instalment of Shs. 1,250/- towards repayment of the Government loan at the end of the year.

Acknowledgments:

The Committee wishes to express its appreciation of help given by Mr. G. Hunter whilst he was Curator of the Museum. The Committee would also like to thank the Editor of the *Tanganyika Standard* for his help in giving publicity to the activities of the Society, and all who contribute articles to make the Journal possible.

THE TANGANYIKA SOCIETY

List of Members as at 31st December, 1955

Abbasi, M. O.	P.O. Box 341, Dar es Salaam.
Adamjee, A. A., O.B.E.	P.O. Box 51, Dar es Salaam.
Administrative Officer	U.N. Advisory Council for Somaliland, P.O. Box 24, Mogadishu, Somaliland.
Aers, I. B.	District Office, Kwimba, Lake Province.
Afrika Instituut	Rapenburg, Leiden, Holland.
Anslie, G. G.	P.O. Box 234, Thompsons' Falls, Kenya.
Aitken, W. G.	Geological Survey, Dodoma.
Allan, A. S.	c/o the Secretariat, Dar es Salaam.
Allen, J. W. T.	c/o Provincial Office, Mwanza.
Allen, Miss P. M.	P.O. Box 399, Nairobi.
Alliance T. T. School	Rungwe, Tukuyu.
Allsebrook, G. P.	c/o District Office, Mwanza.
American Geographical Society	Broadway at 156th Street, New York 32, U.S.A.
Anderson, B.	O.F.C. Scientific Department, Nachingwea.
Andersen, T.	P.O. Box 1, Kidugallo.
Anderson, Miss D.	Cautley Cottage, Slaley, Hexcam, Northumberland.
Anderson, Major J. A. R. ...	Forestry Department, Sarawak, North Borneo.
Anderson, W. St. G.	District Office, Kisiriri.
Anjaria, D. M.	P.O. Box 34, Dar es Salaam.
Anstey, D.	Game Department, Same.
Anstey, G. T.	"Woodcote", Kingsley Green, Haslemere, Surrey.
Apted, Dr. F. I. C.	P.O. Box 19, Tabora.
Arbuthnott, H. S.	P.O. Box 343, Dar es Salaam.
Archdiocese of Dar es Salaam ...	P.O. Box 167, Dar es Salaam.
Arnautoglu, G. N., O.B.E. ...	P.O. Box 766, Dar es Salaam.
Ashira Girls' School	Lutheran Mission, Moshi.
Arusha School	P.O. Box 42, Arusha.
Attenborough, J. P.	c/o the Secretariat, Dar es Salaam.
Atterbury, W. A.	51, Harvey Road, Worthing, Sussex.
Baker, E. C.	Wild Cliff, St. Lawrence, Isle of Wight.
Baker, G. W.	Provincial Headquarters, Mtwara.
Balletto, G. M.	c/o Medical Department, Singida.
Balsley, Dr. K.	Ndolage Hospital, P.O., Kamachumu, Bukoba.
Barker, R. de la B.	c/o Barclay's Bank, Dar es Salaam.
Barnett, Dr. A. M.	P.O. Box 300, Tanga.
Bartlett, C. A., C.M.G. ...	P.O. Box 123, Tanga.
Bates, Miss M. L....	St. Hilda's College, Oxford.
Battye, R. K. M.	District Office, Tanga.

Baum, R. D.	1106, Seaton Lane, Falls Church, Virginia, U.S.A.
Bayer, Mrs. U.	P.O. Box 57, Arusha.
Beauchamp, R. S. A.	P.O. Box 343, Jinja, Uganda.
Beelaerts Van Blokland, P. ...	Kibika Farm, P.O., Mufindi.
Beer, H.	P.O. Box 60, Tanga.
Bekenn, M. G. A....	District Office, Nzega.
Bell, R. M.	c/o P.O., Malya.
Bell, D. H. A.	District Office, Lindi.
Benedict, Rev. J.	Kurasini Mission, P.O. Box 274, Dar es Salaam.
Bennett, G. C.	Amboni House, Tanga.
Bennett, A. L. B.	P.O. Box 132, Moshi.
Berg, Dr. T. M.	P.O. Box 1232, Dar es Salaam.
Bergman, O. H.	P.O. Box 229, Chippewa Falls, Wisconsin, U.S.A.
Betbeder, Father	Ngara, Nr. Bukoba.
Bharmal, G. M.	P.O. Box 283, Dar es Salaam.
Bharwani, P. J.	P.O. Box 100, Dar es Salaam.
Bhatia, Amirali A.	P.O. Box 130, Dar es Salaam.
Bhatia, Allibhai, J.	P.O. Box 130, Dar es Salaam.
Bhatia, L. A.	P.O. Box 123, Tabora.
Bicchieri, Commander L. ...	Kirondatol, P.O. Singida.
Birkby, C.	c/o The Standard Bank, Durban.
Blake, O. P.	P.O. Box 230, Dar es Salaam.
Blaser, E. G.	Amboni Estate, Tanga.
Blower, J. H.	P.O. Box 151, Mbarara, Uganda.
Bobis, B. N.	P.O. Box 45, Arusha.
Boccassino, Professor	Museo Preistorico Etnografico, Rome.
Booker, Miss A.	Education Department, Zanzibar.
Booth, N. W.	P.O. Box 142, Tabora
Boston University	725, Commonwealth Avenue, Boston, 15, U.S.A.
Bourn, J.	3, Temple Fortune House, Hampstead Way, N.W. 11.
Bovill, E. W.	Little Laver Hall, Harlow, Essex.
Boyle, H. W.	District Office, Utete.
Brantschen, Father A.	St. Francis' School, Kwiro, P.O., Mahenge.
Bransgrove, C. A.	P.O. Box 1049, Dar es Salaam.
Brayne, R. B.	c/o the Secretariat, Dar es Salaam.
Brewin, D. R.	Agricultural Department, P.O. Box 4, Musoma.
Brinkmann, Professor, D. ...	2, Dunanstr, Zurich, 44, Switzerland.
Brokensha, D. W.	District Office, Njombe.
Brookbank, W. G.	Agricultural Department, Songea.
Brooks, A. C.	c/o Zoological Society, Regents Park, N.W. 1.
Bryce, V. K.	Education Department, Moshi.
Bullard, Miss W. M.	C.M.S., Kongwa.
Bullaty, F.	P.O. Box 107, Arusha.

Bullock, G. J.	District Office, Nachingwea.
Burnett, G. F.	P.O. Box 204, Arusha.
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ON A THIRD COLLECTION OF REPTILES TAKEN IN TANGANYIKA BY C. J. P. IONIDES, ESQ.

By Arthur Loveridge

(Museum of Comparative Zoology, Cambridge, Massachusetts)

INTRODUCTION

Two earlier reports on specimens submitted by Mr. Ionides for identification or comment, appeared in 1951 (Bull. Mus. Comp. Zool., **106**, pp. 177-204) and 1955 (Journ. E. Africa Nat. Hist. Soc., **22**, pp. 168-198) respectively. The current contribution, as was the case with each of its predecessors, covers a three-year period (1953-1955). However, it should not be assumed that the reptiles now reported on are in any way representative of the relative incidence of a particular species in the area of collecting. On the contrary the bulk of Mr. Ionides' material has gone to the British Museum, and a selection has been returned to the Territory to form a reference collection at Game Department headquarters.

Those retained for Harvard's museum are indicated in the following pages by the letters M.C.Z. (Museum of Comparative Zoology) preceding their registration number which, of course, does not necessarily correspond to the total number of specimens listed in a given series. When a number is preceded by the letter I, it refers to one of Ionides' serial field numbers with which, together with locality and date, each specimen was carefully tagged.

The localities from which Ionides obtained material[1], listed alphabetically in the text, are as follows:

Barikwa, Liwale District.
Bunduki, Uluguru Mountains, Morogoro District.
Kilwa, Kilwa District.
Kingokwa, Uluguru Mountains, Morogoro District.
Liwale, Liwale District (now under Nachingwea).
Mahiwa, Lindi District.
Mahuta, Newala District.
Makote, Newala District.
Masasi, Masasi District.
Miguruwe, Kilwa District.
Mikarambira, Liwale District.
Mitungule, Liwale District.
Mlembwe Juu, Liwale District.
Msinjiri, Rondo Plateau, Lindi District.
Msuega, Liwale District.
Mtene, Rondo Plateau, Lindi District.
Mtepera, Kilwa District.
Mtwara, Mtwara District.
Myono, Bagamoyo District.
Nagaga, Masasi District.

[1]Mto wa Mbu, Arusha District, mentioned in text, is not an Ionides locality.

Nchingidi[2], Rondo Plateau, Lindi District.
Nambunju, north-east Tunduru District.
Newala Boma, Newala District.
Ngahama, Kilwa District.
Songea Boma, Songea District.
Tunduru, Tunduru District.
Wami River, Bagamoyo District.
Zinga, Kilwa District.

Such careful labeling of specimens adds considerably to the value of a collection by enabling one to accumulate breeding and other ecological data. Our knowledge of Tanganyika's herpetofauna has been enormously advanced by the labours of Mr. Ionides, whose devotion to the task and broad scientific outlook is an example that others might well emulate.

Among the Natives of the Southern Province, writes Mr. Ionides, there is much confusion regarding snake names. Any black or blackish snake, whether *Boaedon*, *Lycophidion*, *Calamelaps*, *Naja* or *Atractaspis* is likely to be called *nachiku* by the Magingo, *liteo* by the Yao. Slender snakes with elongate heads like *Psammophis s. sibilans* or *Dendroaspis p. polylepis* are known as *ndemalumpaya* by the Magingo, *nakalungu* by the Ngoni.

From our correspondence Mr. Ionides has kindly allowed me to include some of his observations on snakes—such as a "black" mamba's flattening of its neck to form a "hood". These notes, it may be assumed, will be of more general interest than the taxonomic sections of this report—such as the lengthy discussion on the local form of Gaboon Viper.

The collector is to be congratulated on discovering a new form of horned chameleon during his brief visit to the Uluguru Mountains, viz.

Chamaeleo fischeri uluguruensis subsp. nov.

To these notes I have ventured to add some comments on a recently described woodland gecko of a species not encountered by Ionides. For critical identification of insect remains in the stomachs of lizards I am indebted to my colleague Dr. W. L. Brown; for the determination of parasitic worms I take this opportunity of thanking Mr. Aaron Goldberg.

GEKKONIDAE

Cnemaspis bohmanni is a synonym of *C. quattuorseriatus* Sternfeld

Paratype ♂ (M.C.Z. 51533) Mto wa Mbu. 3.vii.1937

The little gecko *C. bohmanni* was compared by its authors (Müller and Uthmöller, 1950, Zool. Anz., **145**, pp. 118-120) with *dickersoni* Schmidt (1919) of the Belgian Congo, from which it was said to differ in the entire absence of dorso-lateral tubercles. Actually our paratype (received in exchange from Munich Museum) carries on either flank two rows of small tubercles. These are less conspicuous than those on a cotype of *quattuorseriatus* Sternfeld (M.C.Z. 21923), with which it has been compared, but our long series of *quattuorseriatus* displays so much variability in this character that *bohmanni* is clearly within the range, as it is geographically.

[2]Nchingidi is now spelt Msinjiri (*vide* Ionides, in letter of 20th March, 1956).

Pachydactylus bibronii turneri (Gray)

♀ (M.C.Z. 54451) Masasi. 27.x.53

On 27th October the oviducts of this Turner's Gecko held a pair of large soft-shelled ova. Generic identifications of parasitic worms taken from a Kilwa gecko of this race in Ionides' second collection, have been furnished by Mr. Aaron Goldberg as follows: 3 ♀♀ of *Pharyngodon* sp.; 2 ♂♂, 2 ♀♀ of *Spinicauda* sp.; 10 ♀♀ of *Thubunaea* sp., possibly *agamae*. This material is now in the Helminthological collection (Nos. 49312-4) of the United States National Museum.

CHAMAELEONIDAE

Chamaeleo fischeri uluguruensis subsp. nov.

Holotype. Museum of Comparative Zoology No. 54496, a ♂, apparently adult, from Kingokwa, Uluguru Mountains, Tanganyika. Collected by C. J. P. Ionides, Esq., 9th November, 1954.

Paratype. Museum of Comparative Zoology No. 54497, a ♀, apparently adult, with same history and data as the holotype.

Diagnosis.

Horns of ♂ slightly divergent; scales on flanks flattened; length of horn 8 mm., snout (without horn) to vent 65 mm., tail 78 mm. Hornless ♀ with a slightly enlarged tubercle where horn of ♂ would be; her snout (viewed in profile) shows canthus rising sharply rectangular above rostral; scales on flanks flattened; total length 152 (72 + 80) mm. Range: Uluguru Mountains, Tanganyika Territory.....*f. uluguruensis.*
Horns of ♂ convergent (in 39 specimens from Amani, Buloa, Magrotto and Tanga) or at least parallel (6 ex.); scales on flanks granular except in the largest Amani ♂ (M.C.Z. 20193); length of horn in Nguru holotype 17 mm.; snout (without horn) to vent 110 mm.; tail 150 mm. Exceeded by Amani ♂ (M.C.Z. 20193) with a horn of 27 mm. and total length of 377 (152 + 225) mm. Hornless (17 ex.) or horned (8 ex.) ♀♀ show snouts (viewed in profile) with canthus sloping gradually, or at most rounded; scales on flanks granular; total length (without horn) 277 mm. Range: Nguru, Magrotto and *eastern* Usambara Mountains, Tanganyika Territory .....*f. fischeri*

Remarks. *C. fischeri* Reichenow, was described in 1887 from the Nguru Mountains which lie between the Uluguru and Usambara ranges. It has never since been recorded from the Nguru, which is in Usagara, consequently I have no topotypical *fischeri* for comparison and can only assume that German herpetologists were correct in considering that East Usambara *fischeri* represent the typical form, with which they are comparable in size.

The size of these two Uluguru chameleons, which appear to be more or less adult, is closer to that of the races occurring to the north of the Usambaras, i.e. *f. tavetanus* Steindachner (Kilimanjaro to Teita Mountains) and *f. excubitor* Barbour (Mount Kenya), than to those occurring in the western (*f. multituberculatus* Nieden) and eastern (*f. fischeri*) Usambara Mountains.

Prior to the recognition of any races, Tornier (1900, Zool. Jahrb. Syst., 13 p. 611) listed a ♀ "*fischeri*" from Ukami, i.e. the country of the Kami tribe, which is the Uluguru Mountains. In 1926, when I spent two months in the Ulugurus, I constantly enquired for this species whose ♂♂ are distinguished by a pair of serrate-edged, compressed horns projecting from the anteorbital region. Neither Salimu bin Asmani, my Kami bird-collector whose home is in the Ulugurus, nor anyone else had seen such a chameleon so they are probably rare. As Tornier's record, attributed to Franz Werner, was based on a ♀, I used to wonder if the alleged occurrence of *fischeri* in the Ulugurus might be due to confusion with some other species. That a race of *fischeri* does occur in these mountains is confirmed and established by Mr. Ionides' capture of this pair after an interval of over fifty-five years.

Chamaeleo werneri Tornier

2 ♂♂, 3 ♀♀ (M.C.Z. 54498-502) Kingokwa. 5-9.xi.54

This fine series, consisting of a pair of adults and three young, are the first record of the presence of Werner's Three-horned Chameleon in the Uluguru Mountains. Originally (1899) described as from "Maschona-Gebiet," this was later corrected to Uzungwe Mountains. Overlooking this correction I (1932) described *werneri dabagae* from the Uzungwe, an obviously untenable synonym. Both ♂♂ possess three (a rostral and two anteorbital) non-serrate, annulate horns, the ♀♀ only a single, and relatively shorter, rostral horn. On November 9th the adult ♀ held 17 eggs, each measuring about 8 × 15 mm. and containing an embryo.

Length of ♂, 197 (97 + 100) mm., its rostral horn projecting an additional 13 mm.; length of ♀, 190 (92 + 98) mm. plus a horn of 9 mm.; length of juv. ♂, 125 (64 + 61) mm. plus horn of 3 mm.; length of juv. ♀, 138 (65 + 73) mm. plus horn of 1·5 mm.

Brookesia brevicaudata (Matschie)

4 ♀♀ (M.C.Z. 54503-6) Kingokwa. 9-13.xi.54

On November 9-13th the smallest ♀ held many ova of about 1·5 mm. diameter, another ♀ numerous ova about 5·5 mm. diameter, the third 9 eggs measuring 6 × 10 mm., and the fourth 9 eggs of 6·5 × 10 mm. The smallest Short-tailed Chamaeleon measures 56·5 (45 + 11·5) mm., the largest, 75 (60 + 15) mm.; their tails being contained in their total lengths from 4·6 to 5 times.

SCINCIDAE

Mabuya maculilabris boulengeri Sternfeld

♀ (M.C.Z. 54452) Songea. v.54

Midbody scale-rows 30. Length 256 (91 + 165) mm. In May this fine Boulenger's Skink held 8 eggs, each measuring about 8 × 11 mm.

Mabuya perrotetii >< *planifrons*

The recent description of *Mabuya perrotetii upembae* by de Witte (1953, Reptiles in "Exploration du Parc National de l'Upembae", Fasc. 6, p. 100, pl. ii, fig. 4, etc.) suggests the advisability of my publishing some old notes made on East African representatives of the group collected by Ionides and others. The matter was held over in the hopes of doing a revisionary study of the genus which would enable one to decide whether *planifrons* should be regarded as a race of *perrotetii*.

Of *M. perrotetii* (Duméril and Bibron) we have more than a score of examples from Gambia, Sierra Leone, Gold Coast, Togo, Dahomey, Nigeria, French Equatorial Africa and the Belgian Congo. This is a large tubby skink with a relatively short tail; its sides are usually flecked with white.

Of *M. p. upembae* de Witte, a pair of paratypes, to which I would add the three remaining skinks (M.C.Z. 30911-3) from Nyamkolo, Northern Rhodesia, which, in 1933 (Bull. Mus. Comp. Zool., **74**, p. 315) I referred to *planifrons* (Peters). At the time I was perfectly aware of their relationship to *perrotetii* but, as I have said, decided to let the matter rest as they differed in no appreciable way from our *planifrons* from central Tanganyika Territory. *M. p. upembae* is a moderately robust form, its tail of medium length or even long, for that of the ♂ type, which measured 350 (125 + 225) mm., certainly was. Anteriorly on its white-flecked sides appears a dark-brown lateral band.

In Tanganyika Territory (at Ulugu; Unyanganyi; Mangasini; Saranda; Ndogwe; Kilwa; Kalembo and Liwale) all our *planifrons* agree with the North Rhodesian series of *upembae* in scale counts and other characters. Their bodies, however, are more slender; tails average longer; the white flecking on the sides is reduced or absent, while the dark-brown lateral band is more pronounced.

In northeast Tanganyika Territory (Amboni, near Tanga) and eastern Kenya Colony (at Kibwezi; Mt. Mbololo, Teita (Taita); Voi, Malindi; Golbanti; Peccatoni; Lamu Id.; Manda Id.), where I collected topotypes of *planifrons* (Peters) and its synonyms, the body and tail are even more elongate, no white flecking on the sides, but the dark-brown lateral band is very conspicuous. These typical *planifrons* can be distinguished from the intermediates of central and southern Tanganyika by their average scale-counts as set forth in the following key which I drew up some years ago.

Midbody scale-rows 26-30, average 28·1 (for 31 ex.); ear-lobules 0-3, usually 2, average 1·82 (for 50 counts); range: eastern Kenya Colony and northeastern Tanganyika Territory.....*planifrons*

Midbody scale-rows 30-32, average 30·5 (for 15 ex.); ear-lobules 2-4, only one has 2, average 3·0 (for 30 counts); range: central and southern Tanganyika Territory .....intermediates

If one unites the data from all *planifrons* and intermediates for the purpose of contrasting it with that derived from our *perrotetii* one gets the following:

Postnasal frequently (40 out of 78 sides) in contact with the first labial *only*, frequently (38 sides) with both first and second; supraciliaries usually 5, rarely 4, 6 or 7; ear-lobules usually 2, though sometimes 0, 1, 3 or 4; dorsals usually tricarinate, though frequently quinquecarinate; midbody scale-rows 26-32, average 28·7 (for 40 specimens); tail proportionately longer? . . . *planifrons.*

Postnasal rarely (2 out of 80 sides) in contact with the first labial only, normally (78 sides) with first and second; supraciliaries usually 6, rarely 5 or 7; ear-lobules usually 4, though sometimes 0, 2, 3, 5 or 6; dorsals *always* tricarinate; midbody scale-rows 32-36, average 33·4 (for 46 specimens); tail proportionately shorter? . . . *perrotetii.*

Mabuya striata striata (Peters)

♂ (M.C.Z. 54453) Mlembwe Juu. 17.xi.53

Length of head and body 70 mm., tail regenerated. Despite its relatively small size, this is the Two-striped Skink that swallowed a halfgrown House Gecko (*Hemidactylus mabouia*) as recounted in the Journ. E.A. Nat. Hist. Soc., **22**, p.170.

Mabuya varia varia (Peters)

♀ (M.C.Z. 54454) Mtepera. 8.vii.53

Midbody scale-rows 28. Length only 138 (53 + 85) mm., yet on July 8th carrying 4 ova, each measuring about 6 × 7 mm.

Melanoseps ater rondoensis Loveridge

♀ (M.C.Z. 54455) Liwale. 5.vi.55

Midbody scale-rows 18. Length 153 (113 + 40) mm.; tail being contained in total length 2·82 times. On June 5th bearing ova measuring about 4 × 5 mm.

CORDYLIDAE

1845. ZONURIDAE Gray (part), Cat. Lizards Brit. Mus., p. 45.
1884. GERRHOSAURIDAE Boulenger, Ann. Mag. Nat. Hist. (5), **14**, p. 120.
1937. CORDYLIDAE Mertens, Abhand. Senckenberg. Naturf. Ges., No. 435, p. 8.

Recently McDowell and Bogert (1954, Bull. Am. Mus. Nat. Hist., **105**, pp. 98-102) advanced good reasons for reverting to Gray's (1845) arrangement of including *Gerrhosaurus* and *Cordylus* in a single family—a course followed by Cope in 1871. Unfortunately Gray not only included these genera and *Zonurus* (=*Cordylus*) but anguids, lacertids and a skink.

As McDowell and Bogert propose sinking GERRHOSAURIDAE in CORDYLIDAE one might as well do so, but as such action involves removal of the latter from the Anguimorpha to the Scincimorpha of Camp's classification (1923), it might have been less confusing to have synonymized CORDYLIDAE (1937) with GERRHOSAURIDAE (1884) and have the advantage of the earlier name. Admittedly the laws of priority need not be invoked in the selection of family names, though presumably it was because of the antiquity of ZONURIDAE—for which CORDYLIDAE is a substitute—that they chose the latter.

Gerrhosaurus major grandis Boulenger

♂ (M.C.Z. 54507) Tunduru. 11.vi.54

In all respects this Great Girdle-tail, found beside the Rovuma River, agrees with *grandis* as defined in the synoptical key and statistical chart of my revision of the family (1942, Bull. Mus. Comp. Zool., **89**, p. 490). This big lizard was almost dead when picked up by Ionides, having been attacked by a party of Banded Mongoose (*Mungos mungo colonus*) that ran away as Ionides approached.

LACERTIDAE

Nucras boulengeri boulengeri O. Neumann

♂ ♀ (M.C.Z. 54456-7) Kilwa. xii.53 and 5.ii.54

♂, 2 ♀♀, 2 juv. (M.C.Z. 54458-60) Liwale. 29.xi.-8.xii.53; 29.vi.54

♂ (M.C.Z. 54461) Mikarambira. 13.xii.53

♂ (M.C.Z. 54462) Mitungule. 17.xii.53

Dorsals definitely smooth; midbody scale-rows 48-58 of which at least 6 are ventrals; femoral pores from 11 + 11 (in a juvenile) to 14 + 14. Largest ♂ (M.C.Z. 54462), 213 (57 + 156) mm.; largest ♀ (M.C.Z. 54456), 195 (57 + 138) mm. Stomachs contained an acridoid grasshopper, cockroach and termites.

Latastia johnstoni Boulenger

♂ ♀ (M.C.Z. 54463-4) Kilwa. 29.i.54

3 ♂♂, 1 ♀ (M.C.Z. 54465-6) Liwale. 4.viii and 19.xii.53

♂ ♀ (M.C.Z. 54467-8) Mikarambira. 12.xii.53

1 ♂, 5 ♀♀ (M.C.Z. 54469-72) Zinga. 12-14.vii.53

Dorsals keeled; midbody scale-rows 48-56 of which 6 are ventrals; femoral pores 14-16 on each side. Largest ♂ (M.C.Z. 54469), 193 (54 + 139) mm.; largest ♀ (I. 4170), 210 (60 + 150) mm., both from Zinga. On July 14th this ♀ held 4 eggs measuring 6 × 7 mm., though in a smaller one, taken the same day, the ova were only 2·5 mm. in diameter. A third Zinga ♀ held a single egg (? the rest deposited) measuring 6 × 7 mm., while on December 19th a Liwale ♀ held 4 ova of 3 mm. diameter. Stomach contents consisted chiefly of two species of termites, but a caterpillar, cockroach and cricket were also present.

Gastropholis vittata J. G. Fischer

juv. ♂ (M.C.Z. 54473) Barikwa. 13.vii.53

♂♂ (M.C.Z. 54474-5) Myono. 26.xi.54

In East Africa, where it is confined to the coastal belt, *vittata* appears to be one of the rarest of lizards. Previously I have seen only two specimens, one (now in Nairobi Museum) which I procured in 1916 at Morogoro (though it may not have been taken there; cf. Loveridge, 1920, Proc. Zool. Soc. London, p. 147) was reported on by Boulenger (1921, Monog. Lacertidae, **2**, p. 118). The data of the other ♀ (M.C.Z. 18307) Lumbo, Mozambique. 1.viii.18 is now furnished in parentheses following that derived from the Ionides ♂♂.

Granules between supraoculars and supraciliaries 0-1 (5-4); supraoculars 4 (4); supraciliaries 5-6 (6-7); an interparietal, which in M.C.Z. 54475 anteriorly on the left and right gives off two nameless scales (a well-formed additional scale anterior to interparietal); behind the interparietal a small occipital; parietals separated; gular scales between symphysis of chin shields and median collar scale 25-26 (21); enlarged scales in collar 8-10 (9); enlarged shields on forearm anteriorly 7 (7); keeled dorsals across midbody 20-26 (26); keeled ventrals across

belly 10-12 (12); ventrals from collar to preanal semicircle 29-30 (32); preano-femoral pores 11-12 (10); lamellae beneath fourth toe 27-29 (20-21); adpressed hind limb reaches elbow (wrist) of backward-pressed forelimb. Total length of largest ♂ (M.C.Z. 54474), 267 (82 + 185). The numerous differences suggest the possibility that the Mozambique ♀ is subspecifically distinct, but too little is known of the variability of *vittata* in Tanganyika for us to be certain.

Color of adult ♂ in life (from Ionides notes). Above, head dull green; back brown, toward either side a prominent dorso-lateral line from nape to base of tail; tail greyish (alternately flecked with yellow) and brown.

When found, the two adult ♂♂ whose size differs only by 5 mm., were engaged in combat, one having bitten the body of the other in the axillary region. Their stomach contents consisted chiefly of finely-chewed ants of the *Cataulacus pygmaeus* complex, but the remains of a solpugid were also present.

Ichnotropis squamulosa Peters

4 ♂♂, 11 ♀♀, 4 juv. (M.C.Z. 54476-86) Liwale. 3.xii.53-2.vii.54
juv. (M.C.Z. 54487) Kilwa. xii.53
2 ♀♀ (M.C.Z. 54488-9) Miguruwe. 8.vii.53
♀ (M.C.Z. 54490) Mtepera. 8.vii.53
♂ (M.C.Z. 54491) Ngahama. 10.vii.53
♀ (M.C.Z. 54492) Zinga. 14.vii.53

Supraoculars 2, preceded and followed by small keeled scales, rarely 3 (10 of the 50 sides) or even 4 (2 sides); separated by 9-14 (average 11·1) granules from the supraciliaries; supraciliaries 3-5 (3 on only 5 sides, 5 on 7 sides); parietals separated by a large interparietal, rarely (M.C.Z. 54485; 54489) by an occipital also, otherwise occipital absent (in 23 lizards); keeled dorsals across midbody 31-41 (average 35·6) or one or two of the outermost rows smooth; smooth ventrals across belly 8; no gular collar; gulars + ventrals from symphysis of chin shields to preanal semicircle 58-68 (average 63·2); enlarged shields on forelimb anteriorly 7-8; preano-femoral pores 9-14 (9 on 2 sides only, 14 on 2 sides only; average 11·8 for 50 sides); adpressed hind limb reaches axilla (in 5), shoulder (in 12), neck (in 2), ear (in 4 juveniles), or almost to the eye (juv. M.C.Z. 54479); pluricarinate lamellae beneath fourth toe (16-21; average 19).

Colour. On each side of the back in juveniles is a pinkish-buff dorsolateral line that converges with its fellow on the tail. Juveniles are altogether much paler than the adults; adult ♂♂ are gray to plumbeous beneath, in contrast to the adult ♀♀ which are white or cream-coloured.

Size. Total length of largest ♂ (I 5103), 206 (70 + 136) mm.; largest ♀ (M.C.Z. 54486), 215 (80 + 135) mm.; though the ♂ is exceeded in snout-to-vent length by others of 72 mm., the ♀ by one of 81 mm. Both, however, exceed the maximum given for their sex by Boulenger (1921, Monog. Lacertidae, **2**, p. 193). Smallest (M.C.Z. 54487), 74 (27 + 47) mm.

Breeding. This smallest juvenile was taken in December, and four slightly larger ones between December 3rd and 19th. During April and May at Liwale. July in Kilwa district, most ♀♀ were gravid as follows:

April 10, ova slightly elongate, measuring 2 mm.

April 10, 7 eggs measuring 7 × 11 mm.

April 16, ova measuring about 3 × 3 mm.

April 16, ova measuring about 3 × 3·5 mm.

April 16, 11 eggs about 7 × 12 mm., small ova also present.

April 16, 1 egg 7 × 13 mm. (? rest laid or removed).

May 13, 10 eggs measuring 8 × 12 mm.

May 13, 10 eggs measuring 8 × 12 mm.

July 8, 10 eggs measuring 8 × 12 mm.

July 8, 10 eggs measuring 8 × 11 mm.

AMPHISBAENIDAE

Amphisbaena ionidesii Battersby

♀ (M.C.Z. 54493) Msuega. 7.xii.53

Included here for its record of a new locality for this worm-lizard, whose scale-counts and dimensions are within the range of the species.

VARANIDAE

Varanus niloticus niloticus (Linné)

Mr. Ionides writes that on 26.xi.53 a young ♀ Nilotic Monitor, measuring 284 (129 + 155) mm. when alive, suddenly seized a ♀ Stripe-bellied Sand-Snake (*Psammophis sub. sudanensis*) of 744 (492 + 252) mm. by the head. During captivity this monitor had been supplied with grasshoppers. These were apparently eaten as they disappeared from her cage and the lizard was plump at the time she attacked the sand-snake. After much of the latter had been swallowed, the monitor disgorged the snake, which died shortly afterwards. The monitor seized and reswallowed 281 mm. of the corpse, then spent six hours endeavouring to rid herself of the rest by rubbing it against the wooden sides of her box, or the wire netting that covered it. At intervals she engaged in stretching exercises, presumably with the object of providing more accommodation for the rest of the reptile. Eventually, however, she had to disgorge it. On 11.xii.53 this monitor was swallowed by a Vine-Snake (*Thelotornis k. capensis*) in preference to a couple of Two-striped Skinks (*Mabuya s. striata*) which had been in her cage for several days.

Varanus exanthematicus microstictus Boettger

subadult (M.C.Z. 54494) Kilwa. 21.vi.53

juvenile (M.C.Z. 54495) Masasi. x-xi.53

Nape scales (without surrounding disk) distinctly larger than those on occiput and centre of back; midbody scale-rows about 130-150; ventrals from collar-fold to level of insertion of hind limbs 90-98. The juvenile measures 258 (123 + 135) mm.

TYPHLOPIDAE

Typhlops schlegelii mucruso (Peters)

juv. ♂ (M.C.Z. 54508) Bunduki. 9.xi.54

Midbody scale-rows 32; midbody diameter 5·5 mm., included 38 times in total length. Total length 210 (207 + 3) mm. The coloration of this young specimen is somewhat unusual in that the pigmentation, which is of the lineolate type, is concentrated on the dorsum, leaving the underside uniformly creamy white.

Typhlops tettensis tettensis (Peters)

♂ (M.C.Z. 54509) Kilwa. iv.54

Midbody scale-rows 22; midbody diameter 7·5 mm., included 38·2 times in total length of 300 (287 + 13) mm. The light (greenish white) dorsal spots are on the *posterior* portion of each scale; underside *bluish green*. All 12 examples of *tettensis* that I have examined, possessed 22 midbody scale-rows, but as this occurs occasionally in the next race there is little but colour pattern as a final criterion of separation.

Typhlops tettensis rondoensis Loveridge

♀ (M.C.Z. 54510) Msinjiri. 27.vii.55

Midbody scale-rows 22; midbody diameter 11 mm., included 33·2 times in a total length of 370 (365 + 5) mm. The cream-coloured dorsal spots are on the *anterior* portion of each scale; underside uniform *creamy white*.

Msinjiri (= Nchingidi) is on the Rondo Plateau from whence came the type series of five juveniles, each having 24 scale-rows, now revealed as only an average character. This fine specimen also shows this race attains almost to the dimensions of *t. tettensis*.

LEPTOTYPHLOPIDAE

Leptotyphlops conjuncta conjuncta (Jan)

4 (M.C.Z. 54511-4) Kilwa. 25.i.54-4.v.55

4 (M.C.Z. 54515-7) Liwale. 25.iv.54-20.ii.55

Midbody diameters included 51·6 to 65·3 times in the total lengths; length of tails included 10·0 to 14·3 times in total lengths. Largest ?♂ (M.C.Z. 54515), 193 (177·5 + 15·5) mm.; largest ?♀ (M.C.Z. 54511), 196 (183 + 13) mm. Glossy black, uniform, or brown below.

COLUBRIDAE

Boaedon lineatus lineatus Duméril and Bibron

♂ (M.C.Z. 54518) Liwale. 8.iv.54

Midbody scale-rows 27; ventrals 202; subcaudals 64; preoculars 2; postoculars 2; temporals 1+2. The squamation is normal and this snake was only submitted because of the absence of markings and rather unusual coloration, possibly due to its being about to slough.

Ionides writes that a very large Lined House-Snake swallowed an Eastern Burrowing-Adder (*Atractaspis b. rostrata*) of approximately 22 inches in length. When I remarked on the unusual nature of this diet for a house-snake, Ionides replied that in southeastern Tanganyika captive house-snakes, while preferring rodents, eat geckos.

Mehelya nyassae (Günther)

♂ ♀ (M.C.Z. 54519-20) Kilwa. 29.i.54

Midbody scale-rows 15; ventrals 164-170; subcaudals 67-69. The new low in ventral counts is provided by the ♂. The stomach of the ♀ held two skinks (*Riopa sundevallii* and *Ablepharus wahlbergii*).

Prosymna pitmani Battersby

3 ♂♂, 2 ♀♀ (M.C.Z. 54521-4) Kilwa. 8.i-1.iii.54

3 ♀♀ (M.C.Z. 54525-7) Liwale. v.53-6.i.55

Some of the Kilwa district series are topotypes from near Nanguale, one (M.C.Z. 54523) is from the upper reaches of the Mavuji River in the western part of the district.

Midbody scale-rows 19-21 (19 in ♂♂, 21 in ♀♀); ventrals 142-157 (142-146 in ♂♂; 155-157 in ♀♀); subcaudals 17-27 (17-19 in ♀♀; 26-27 in ♂♂); preoculars 1-2 (2 on 5 of 16 sides); postoculars 2; temporals 1+2 or 2+2 (2+2 on 6 sides). Length of largest known ♂ (M.C.Z. 54521), 270 (235+35) mm.; largest known ♀ (M.C.Z. 54527), 308 (285+23) mm

On June 6th a ♀ (M.C.Z. 54525) held 4 eggs measuring 8×20 or 23 mm. The stomach of this same snake, also that of the largest ♀ taken in May, each held two or more, 30 mm. long, collapsed shells of hatched-out snake or lizard eggs! This is our sole information as to the diet of this species so recently discovered by Mr. Ionides.

Chamaetortus aulicus aulicus Günther

♂ (M.C.Z. 54528) Kilwa. 20.i.54

♂ ♀ (M.C.Z. 54529) Liwale. 3.iv.54

Midbody scale-rows 17; ventrals 176-189; subcaudals 81-94; upper labials 7, the third and fourth entering the orbit in the Liwale ♂ (I 4364), the normal 8, with third, fourth and fifth entering, in the other two; similarly in the Liwale ♂ there are only 9 lower labials, of which 4 are in contact with the anterior chinshields, instead of the normal 510, with 5 in contact. The Kilwa ♂ is unusually large, 634 (480+154) mm., though not a record.

Rhamphiophis oxyrhynchus rostratus Peters

One of Ionides captive Sharp-nosed Snakes swallowed seven young rats on 16.i.54. On 3.ii.54 the same reptile, after refusing a smallish rat (possibly because it was too big), attacked and tried to kill an adult *Meizodon semiornata* at about 6.55 p.m. After a struggle lasting three hours it gave up the attempt. This was the first time Ionides had known a sharp-nosed snake attempt to eat another serpent; however I have recorded one doing so in the wild state.

Psammophis subtaeniatus sudanensis Werner

At Mahiwa, Lindi district, on 29.iii.55, Ionides observed a moderate-sized Sudan Sand-Snake vainly striving to swallow a Square-marked Toad (*Bufo r. regularis*) which it had seized by the head. Every attempt was thwarted by the toad inflating itself. Eventually the snake released its prey, only to seize it again when the toad started hopping away. This time the snake threw two coils about the toad whose body it bit repeatedly as if attempting to deflate it. Failing completely, it let the toad go.

Ionides adds that this was the first occasion on which he had seen a Sudan Sand-Snake tackle an amphibian—their normal prey consisting of lizards and rodents.

Thelotornis kirtlandii capensis A. Smith

Mr. Ionides tells me that he and members of his staff have often been bitten by large examples of the Cape Vine-Snake without suffering any after effects. On the first occasion, about May 1945, he was holding the snake in his left hand while introducing it into his coat pocket on the left side, his right hand being otherwise occupied. The reptile bit and held on for some time before it was forced to let go. The marks made by both front teeth and rear fangs were bleeding freely. As this was the first time Ionides had been bitten by a vine-snake he watched somewhat anxiously for signs of poisoning, but none developed. Consequently the following notes on the first fatality following the bite of a vine-snake of which I have heard, are of unusual importance.

Mr. F. J. de R. Lock, also a Game Ranger and personal friend of Ionides, became interested in snakes and kept some in captivity. Since the end of the Second World War, Lock, who was about 33 years of age, had suffered intermittently from a gastric ulcer. More recently he had recovered from an attack of spirillum fever which was followed by bacillary dysentery. Constitutionally he could not be considered strong, and was much exhausted on December 20, 1953, when he arrived home after a gruelling three-weeks safari in which his car had been repeatedly bogged down.

Two days later Lock was celebrating his wedding anniversary with three friends. Though all had taken some liquor no one was drunk. After dinner Lock took his visitors out to see some snakes. These consisted of a young Puff Adder (*Bitis a. arietans*) whose fangs had been removed by its native captor; a small Night Adder (*Causus* sp.) and a Vine Snake (*Thelotornis k. capensis*). Taking out the Puff Adder, Lock showed it to his friends, handling it with care and returning it to the cage without incident.

Then Lock took up the Vine Snake which bit the base of his left thumb. This was about 11.30 p.m. Replacing the reptile Lock returned to the house with his companions, one of whom was staying with him. All four agreed on the accuracy of this account. When Mrs. Lock learned of the bite she wanted to give her husband an injection, but he refused on the grounds that Vine Snakes are not dangerous to man. There was no discoloration at the site of the bite, only a slight swelling and some numbness.

Lock took part in a couple of dances then, complaining of a headache, went to bed. He slept well that night, but next morning decided to stay in bed as, like everyone else at the party, his digestion was upset—due it was supposed to the

celebration. Lock referred to the numb feeling in his thumb and some soreness of the glands in his left armpit, but still there was no discoloration. Mrs. Lock again proposed giving an injection but her husband again objected. The guests had breakfast but Lock took none. Shortly afterwards he began vomiting intermittently, bringing up bile chiefly. For one with a stomach ulcer this seemed a natural sequel to a party.

Throughout the day until 4.30 p.m. the vomiting continued. Lock then tried drinking milk, but like the water of which he had taken a great deal, he could not keep it down, vomiting it up every time. After retiring Lock slept off and on until midnight (12 p.m. of 23-24.xii.53) when he vomited about four tablespoonfuls of red blood. This was assumed to be haemorrhage of the ulcer, induced by the constant vomiting. Positively refusing to have the doctor summoned, Lock then slept until 3.00 a.m. On waking he vomited a basinful of dark-purplish or blackish-looking blood. The doctor was sent for immediately and given all the facts of the case.

The doctor too, inclined to discount the snakebite, thought the haemorrhage was caused by the ulcer, but ordered Lock's removal to hospital straight away. He reached the hospital at 4 a.m. and was given an injection to help him sleep. At 10 a.m. Lock's blood pressure was good, his pulse strong, and the doctor did not think a blood transfusion necessary. He suggested that after Lock had brought up all the bad blood, he would begin to improve. During most of that day he was kept drugged, for he complained of severe abdominal pains; periodically he continued to vomit blackish blood. During the afternoon he seemed slightly better.

Suddenly, at 6.15 p.m., Lock's right arm began jerking, strong convulsions followed and then he fainted. At 9 p.m. a blood transfusion was given, after which the patient slept so peacefully it was thought he had turned the corner. However, Lock passed into a coma. At 11.15 p.m. there was profuse bleeding of very dark blood from nose and mouth. At 12.15 a.m. on 25.xii.53 he died. The postmortem, undertaken by two doctors, revealed haemorrhage of every organ in the body, also slight haemorrhage of the brain; the ulcer was represented by a healed scar. The verdict was death from snake-poisoning, possibly absorbed into a sore throat by the patient's action in sucking the bitten thumb.

Both Vine Snake and Puff Adder were submitted to Dr. V. F. FitzSimons of the Transvaal Museum, Pretoria, for his opinion. In his reply he wrote: "The specimen of *T. k. capensis* sent down to me in connection with the inquest of F. J. de R. Lock's death is a male and measures 2 ft. 5 inches in length. On arrival here, swabs of mucous were taken from the base of the fangs. This proved toxic when injected into mice. A close study of the medical report and the events leading up to and associated with death, to my mind prove conclusively that Lock died from venom intoxication received internally. Apparently the snake was angered prior to biting and, in consequence, the venom had seeped into the mouth-fluids and been deposited on the epidermis when biting. All symptoms are consistent with internal absorption, while the local ones were quite incidental . . . The P.M. does not preclude the presence of some abrased surface of the alimentary canal. By sucking the site of the bite, and apparently swallowing the toxic fluid, internal poisoning resulted. All the symptoms are consistent with the haemorrhagins found in Bird Snakes' Venom . . ." V. FitzSimons.

Commenting on the case Ionides remarks that one of his African collectors suffered a swollen hand after the bite of a *Rhamphiophis o. rostratus*, but on the several occasions he and his African assistants had been bitten by *Thelotornis*—though the snakes chewed with their rear fangs—no one had even local symptoms. He wonders if certain individuals may be hyper-sensitive to snake venom as are others to bee-stings, and to what extent such susceptibility is increased by physical debility.

Dispholidus typus (A. Smith)

For over an hour on 21.v.54, at Nagaga and at a distance of about seven paces, Ionides watched a pair of Boomslangs in coitu, their anal openings juxtaposed. The ♂ (captured) was entirely black, the ♀ (sex presumed as she escaped) lightish brown. Mating took place on the ground in a stony gully in which were scattered bushes; some trees were growing on the bank.

On 28.xi.54, north of the Wami River, a large green ♀ Boomslang was observed swallowing a nestling Fork-tailed Drongo (*Dicrurus a. divaricatus*) that she had removed from the nest. This was found to be empty though normally two or three young are raised. The parent birds fluttered around the feeding snake at which they periodically dived. When Ionides seized the reptile she disgorged the nestling. This he salvaged and subsequently placed in her cage hoping the snake would ingest it in due course. Instead it was taken and swallowed by an adult ♀ Boomslang (brown phase) already installed in the cage. On the following day (29.xi.54) at Myono, another brown Boomslang was captured in a coconut palm just after it had swallowed a fledgling yellow weaver.

On 18.iii.55, in a mango tree at Makote, a Boomslang made an unsuccessful attempt to seize an adult bulbul. The snake itself was then captured by Ionides who describes it as black above, black and yellow beneath; he believed the reptile to be a ♀.

A brown ♀, captured some fifteen feet from the ground in a mango tree at Makote, about noon on 10.ix.55, laid an egg about 2 p.m. the same day. During the following night two more eggs were laid. On the 11th a fourth, fifth and sixth egg followed at approximately 6.30 a.m., 7.30 a.m. and 9.30 a.m.; three more between 11 a.m. and 1.30 p.m., a tenth at 3.30 p.m. Still another was found in the water dish where it had been overlooked. Apparently this completed the clutch for no more eggs were laid during the following four days after which the snake was sent away. Each egg measured about 22 × 50 mm.

Calamelaps unicolor unicolor (Reinhardt)

♂ (M.C.Z. 54530) Kilwa. 25.i.54

♀ (M.C.Z. 54531) Liwale. 10.v.54

Midbody scale-rows 17; ventrals 164 (♂)—190 (♀); subcaudals 20 (♀)—29 (♂). On the left side of the head of the ♂ is a small scale that might be considered analogous with an anterior temporal, normally lacking in this species.

From Sierra Leone across Africa to Kenya Colony and Tanganyika Territory (in the Usambara and Uluguru Mountains) one finds *u. unicolor* distinguished solely by having 17 midbody scale-rows. Elsewhere in Tanganyika Territory *Calamelaps* having 19 scale-rows predominate, though with them one sometimes finds an occasional individual like those listed above, having 17. It seems advisable to list such specimens under *u. unicolor* until the areas of intergradation can be properly plotted.

Calamelaps unicolor warreni Boulenger

4 ♀♀ (M.C.Z. 54532-4) Liwale. 26.iv.53-18.v.54

Midbody scale-rows 19; ventrals 191-201; subcaudals 19-21. This is the usual form occurring in the non-forested savanna lowlands of East Africa.

Amblyodipsas katangensis ionidesi Loveridge

4 ♂♂, 10 ♀♀ (M.C.Z. 54535-47) Liwale. 23.xii.53-17.ix.55

Midbody scale-rows 15; ventrals 168-194 (♂♂ 168-174; ♀♀ 180-194); subcaudals 16-24 (♀♀ 16-19; ♂♂ 22-24); postocular 1 (13 sides) or absent (15 sides). The terminology of certain scales presents a problem. In describing *A. k. katangensis*, de Witte mentions a temporal and 5 upper labials; his figure shows 4 very large labials followed by a much smaller one that is scale-like. Whether this should be termed a labial is somewhat questionable as it is frequently posterior to the gape. However, the arrangement described by de Witte is represented in 4 of the 14 snakes listed above. In the other 10, as in the type of *ionidesi*, the small scale is absorbed by the huge temporal which forms a continuous series with the 4 large labials.

Once again this series demonstrates that Liwale (and Kilwa) *Amblyodipsas* have a lower ventral count than do specimens from Tunduru which, in respect to this character, approach or agree with *k. katangensis*. Mr. Ionides informs me that most of the Tunduru specimens mentioned in the second report on his collections, were taken near Nambunju, which is near the border separating Tunduru and Liwale districts.

One ♀ (M.C.Z. 54543), which happens to have the greatest number of ventrals, differs from all the rest in that each scale—both above and below—is edged with lighter colour so as to present a grizzled appearance; two other snakes, being about to slough, are uniformly gray, otherwise the entire series is either uniformly glossy black above and below except for a small patch of white usually present on the chin and anal area; in addition two snakes have a very few white ventrals but none present the chequered appearance of the undersides displayed in nine snakes of the previous Liwale series.

Previous record length exceeded by the largest ♂ (M.C.Z. 54538) of 295 (270+25) mm., but the largest ♀ (I 4944, now in T.T. Game Dept. coll.), 360 (340+20) mm. is slightly below the maximum for that sex. On April 3rd a ♀ held 3 eggs measuring 4×17 mm. Several snakes taken during April and May possess quite astonishing deposits of fat. Writing on December 23rd, 1953, Ionides remarks that, as a result of rain, he had just captured two *Amblyodipsas*.

Aparallactus lunulatus lunulatus (Peters)

♂ (M.C.Z. 54548) Liwale. 14.vi.55

Midbody scale-rows 15; ventrals 153; subcaudals 56. Length 372 (290+82) mm. Though typical in all scale characters, this centipede-eater was sent me by Ionides on account of its unusual coloration, at least strikingly different from most Liwale *lunulatus*. Except that it has a dark nuchal collar, however, in body coloration it resembles the topotype ♀ that I took near Tete (1953, Bull. Mus. Comp. Zool., **110**, p. 283).

ELAPIDAE

Elapsoidea sundevallii decosteri Boulenger

♂ (M.C.Z. 54447) Liwale. 23.v.54

Midbody scale-rows 13; ventrals 152; subcaudals 23. Above, black; below, gray except for a cream-coloured area in the gular-labial region. Length 546 (510+36) mm.

Naja nigricollis nigricollis Reinhardt

On 31.v.53 Ionides captured a ♀ all-black Spitting Cobra that was definitely stouter and longer than the six-and-a-half-foot ♂ that he got near the same place in 1948. In the same area, he says, he obtained colour variants that other herpetologists identified as *N. n. mossambica* and *N. n. pallida!* The latter, red in life, I regard as a recognizable race on the basis of scalation but its range is restricted to red laterite country from Longido and Kibwezi north to Lake Rudolf. I doubt if *mossambica* is distinct from *nigricollis*.

Naja melanoleuca Hallowell

Recently Dr. Raymond Laurent (1955, Revue Zool. Bot. Afr., **51**, p. 132) has described *N. m. subfulva* from Kabare territory, Kivu, Belgian Ruanda, whose status I have not investigated. However, I enquired of Mr. Ionides as to the situation in southeast Tanganyika Territory and he replied (24.x.55) that in 1945 he took an ordinary black *melanoleuca* in Liwale Boma, a large variegated one just outside, and a very dark brown juvenile near the same place. The specimens in question are now represented by casts in the Coryndon Museum, Nairobi.

Already, on 10.ix.55 at Makote, Ionides had reported capturing a fine ♀ Black-and-white Cobra that was: above, brown spotted with black; below, mottled pale brown and blackish. When pulled from a tree she held on to a small stick with great tenacity and almost escaped from his grasp as he was endeavouring to induce her to enter a bag. Total length 2,300 mm., i.e. almost 7 feet, as measured by Dr. Guglielmo Marigili of Rome.

The Ngindo name for this cobra, states Ionides, is *njiwile*, i.e. "the one who ducks you under water." The basis of the name is a belief that the snake hides in *Raphia* palms and strikes at one's head so as to force one under water.

Dendroaspis angusticeps (A. Smith)

Ionides, writing on 19.iii.54, remarks that he had captured eight *angusticeps* and one *polylepis* during nine days spent in Newala and Mtwara districts. Three of the Green Mambas were in low, but dense, secondary growth, the rest in Mango or Cashew trees. All had recently sloughed, or were about to do so. While one was being held, before being put into a bag, she bit herself and subsequently died. Whether death was due to these bites, or possibly to some internal injury received during capture, is uncertain.

Dendroaspis polylepis polylepis (Günther)

juv. ♂ (M.C.Z. 54448) Kilwa. iv.54

Midbody scale-rows 23; ventrals 256; subcaudals 121. Above, olive green; below, creamy white anteriorly to greenish posteriorly. Length 759 (600+159) mm.

Writing on 13.ii.54, Mr. Ionides states that he had just caught an almost nine-foot mamba whose dorsum displayed a dark, almost purplish, tinge. This ♀, on being restrained, "spread a quite noticeable hood."

VIPERIDAE

Atractaspis bibronii rostrata Günther

Writing on 23.xii.53, Mr. Ionides says he has a ♀ Eastern Burrowing-Adder with an estimated length of about 22 inches. When held by tongs some three inches behind the head and teased with a small stick, the snake half-encircled the stick with her 'neck', the better to hang on and embed the fangs which she did in the usual way with a downward thrust. When teased on the left side she struck the stick with the left fang, the only one she extruded. This she did repeatedly until, becoming exasperated, she again half-encircled the stick and held on with the left fang. As she did so Ionides noted that the right side of the mouth remained tightly closed, but that the left side of the lower jaw was slightly contracted, leaving that side of the mouth open for the extrusion of the fang.

Ionides then, by teasing her on the right side, induced her to repeat the action on that side while the left side of the mouth was kept closed. She responded again and again in this way until, becoming tired, she refused to strike any more. This big burrowing-adder was subsequently swallowed by a still larger Lined House-Snake (*Boaedon l. lineatus*).

Bitis arietans arietans (Merrem)

On 29.x.55 Mr. Ionides forwarded the following unusual observation from Charles T. Powell of the Ifunda Trades School, Southern Highlands Province, Tanganyika Territory. Mr. Powell, being interested in reptiles, keeps vivaria. In one cage that held a couple of Puff Adders which had not fed for about a week, he placed an "ordinary black rat and three striped mice." One of the mice was promptly struck by an adder that, after the usual interval, approached the dead mouse as if to swallow it.

Instead of doing so, however, the reptile glided right over the corpse and up to the rat which was sitting up on its hind legs a foot away. Gaping widely but without striking, the adder placed its open mouth over the rat's head and proceeded to swallow the animal, rather more rapidly—it seemed—than if the rodent were dead. After the prey had passed down the snake's gullet it made a few convulsive struggles. At time of writing, five days later, the puff adder appeared to be in perfect health.

Bitis gabonica gabonica (Duméril and Bibron)

Skin (M.C.Z. 54450) Makote. 21.iii.54

♂ (M.C.Z. 54449) Newala. 25.iv.54

♀ (M.C.Z. 53980) Mahuta. 6.v.54

The skin, being headless, is of little value except for the locality which, like Mahuta, is in Newala district. This skin, brought to him by an African, was the first indication to reach Ionides of the presence of the Gaboon Viper in the district.

Several years ago Dr. Robert Mertens (1951, Aquar.—Terrar.—Zeitsch., **4**, pp. 270-271, figs. 1-2) invited attention to the fact that in the western part of its vast range the Gaboon Viper exhibits a solidly dark temporal patch extending forwards and upwards with its apex reaching, or almost reaching, the eye. For these snakes the name *Bitis gabonica rhinoceros* (Schlegel, 1855) was available. Schlegel's type came from "Guinea" and we have several specimens of it from Liberia. Mertens gives its range as extending eastwards to the Gold Coast.

On the other hand, in typical *B. g. gabonica* the somewhat larger dark temporal patch extends forwards to beneath the eye, but is interrupted or divided by a light, more or less wedge-shaped, streak that, based along the labial border, extends upwards till its apex reaches the eye. The Museum of Comparative Zoology has examples from the Cameroon; Gaboon (type locality); Belgian Congo; Uganda and northeast Tanganyika Territory (Usambara and Magrotto Mountains).

Up to this point the situation is straightforward, but not so when one comes to the Southern Province of Tanganyika where Mr. Ionides has been collecting. There one encounters Gaboon Vipers with a solidly dark temporal patch like that of *g. rhinoceros* except that it is more extensive for it reaches the subocular region as in *g. gabonica*. Some years ago when I collected a pair of these snakes on the Rondo Plateau, Southern Province, I considered them as furnishing additional evidence of similarities in the herpetofaunae of East and West Africa (such as Liberian examples of *Hyperolius concolor* which appear indistinguishable from those in Natal, though frogs from intervening areas have produced recognisable races).

When I solicited the help of Mr. Ionides, hoping that additional data might clarify the situation, it only became more confused as he found so many snakes with markings of an intermediate nature. One might suggest that possibly *g. rhinoceros* originally extended over the whole of tropical Africa but was later supplanted by snakes of the *g. gabonica* type except in the southeastern portion of its range where a few individuals approaching the *rhinoceros* type of marking still persist. Omitting the skin mentioned above, it may assist others to appraise the situation if I briefly list the appearance of the other material, together with the notes so kindly supplied by Mr. Ionides.

♂ ♀ (M.C.Z. 48516) Nchingidi. 12.v.39. (Loveridge)

The ♂ has a solid dark patch except for a light, black-edged spot on the twelfth upper labial. The ♀ has a solid dark patch except for a *very short*, light streak extending downwards and backwards from the orbit, whose diameter equals length of the streak.

The Newala ♂ (M.C.Z. 54449) has a solid dark patch except for a light spot on the posterior half of the tenth, and anterior corner of the eleventh, upper labials.

The Mahuta ♀ (M.C.Z. 53980) has a solid dark patch except for a light spot on the posterior half of the eleventh, and anterior corner of the twelfth, upper labials, also a *very short*, light streak extending downwards and backwards from the orbit, whose diameter is slightly greater than the length of the streak.

On 1.vi.54 Ionides wrote that, excluding the headless skin, all four *gabonica* seen by him had a solid dark patch, but on 17.ii.55 he adds that a ♀ taken by him at Newala displayed a black patch divided suborbitally by a faint, but definite, narrow light line. Again on 17.iii.55, at Makote, where a *gabonica* was in grass

and undergrowth at the edge of some forest rather less than five miles from Newala Boma, the black patch was divided suborbitally by a "very distinct light line" that appeared to be "exactly similar" to those on specimens of *g. gabonica* which Ionides had taken in the Ituri Forest of the Belgian Congo. On 20.iii.55 at Mayala, Territoire Epulu, yet another with the dark patch divided by a distinct light line. On 3.ix.55, at Makote, a ♂ *gabonica*, and on 14.ix.55, at a spot three-and-a-half miles from Newala Boma, an unusually large ♀ both displayed dark, patches divided by a light line.

Finally, as if to annihilate any hope of the possibility that a pure culture of an almost solid dark patch form might be surviving on the rather isolated Rondo Plateau, in July, 1955, Ionides found a ♂ there at Mtene, which possessed a light line "though rather faint" dividing the dark temporal patch.

BUHAYA AND THE AFRICAN EXPLORER

By Hans Cory

[*Editorial Note:* This article consists of two extracts from *A History of the Buhaya District* by Hans Cory which is shortly to be published by the Government Press.]

Several of the most famous of the explorers of East Africa passed through Buhaya on their journeys, although it was not their final goal. Karagwe in particular attracted much attention and they have left us vivid descriptions in their books of this chiefdom and its chiefs, thus supplying the first authentic pictures of a Haya *Mukama.*

On the 30th July, 1858, T. H. Speke had reached the southern shore of a lake which his Nyamwezi porters called the Nyanza; the Arabs, Lake Ukerewe. From a hill, (Kirumba?) almost within the present township of Mwanza, Speke surveyed the lake and it is clear that he collected many details about this water because he writes: "I have no doubt that the lake at my feet is the source of the Nile whose origin has been the object of many discussions and the goal of many explorers. This is a lake bigger in dimension than the Lake Tanganyika, so broad that no one could see from shore to shore and so long that no one knew its length." Speke gave the lake the name Lake Victoria. From this brief view of the water Speke returned to Unyanyembe to join his comrade Burton, but the latter disbelieved the descriptions of Speke.* After their return to Europe the Royal Geographical Society agreed to send out T. H. Speke to Africa for a second time so that he might be in a position to prove to the world by actual inspection of the River Nile's exit from the lake that his speculations were true.

T. H. Speke took as his companion T. A. Grant and the expedition left Bagamoyo in October 1860, and went via Usagara, Ugogo, Tabora (called Kaze at the time), Usalala and Rusubi to Karagwe. The Mukama at the time was Rumanyika I Rugundu and Speke describes the great contrast between the orderly procedure and friendly welcome in Karagwe and the troublesome, continuous extortions he experienced on his march through Rusubi (now the main area of the Biharamulo District). Karagwe was entered along the shore of Lake Burigi, of which it is said that it was formerly considerably bigger but that it shrank when Mukama Ndagara died.

Speke says "The further we went in this country the better we liked it, as the people were all kept in good order and the village chiefs were so civil that we could do as we liked. The rhinos were so numerous and impudent on several occasions as to contest the right of the road with us." The goal of the expedition was Mukama Rumanyika's residence at Bweranyange. Before they descended from the hills to it they saw a sheet of water lying snugly within the folds of the hills. Speke christened it the Little Windermere because Grant thought it so like the English lake of this name. Mukama Rumanyika sent an invitation to visit him at once, and the two Europeans entered "the vestibule and walking through extensive enclosures studded with huts of kingly dimensions were escorted to a pent-roofed baraza". The Mukama received them most cordially and gave them the choice of selecting a site for their camp in or outside his residence. At the first meeting Rumanyika was plainly dressed in an Arab-type black cloak and

*F. Burton. *The Lake Regions of Central Africa*, London 1864.

wore stockings of rich coloured beads and neatly-worked wristlets of copper. The Mukama was six feet two inches in height and his countenance had a fine, mild, open expression. Rumanyika and Speke became very friendly during their first and following conversations. One afternoon Speke visited one of Rumanyika's brothers and found him and his chief wife sitting side by side on a bench of earth covered with grass; in front of them were placed numerous wooden pots of milk. "The wife was of extraordinary dimensions yet pleasing beauty. So large were her arms that, between the joints, the flesh hung down like large, loose stuffed puddings." Speke was told that the wives of the King and princes were fattened on a diet of milk to such an extent that they could not stand upright.

On another afternoon the explorers were invited by the Mukama to witness his New Moon levee, a ceremony which took place every month. In the first court a horn of magic powder was stuck into the ground. In the second court were thirty-five drummers ranged behind thirty-five drums. In the third court, to which Speke and Grant were escorted by members of the royal family and officers of high rank, they found Rumanyika squatting on the ground in the principal hut. He wore a tiara of beads, from the centre of which rose a plume of red feathers, while the lower part of his face was encircled by a fine large white beard. After the guests had taken their seats the thirty-five drums all struck up together in very good harmony. When their deafening noise was over, a smaller band of hand drums and reed instruments was ordered in to play. Now sub-chiefs and minor officials advanced one by one with strange gesticulations, holding drumsticks or twigs in their hands. As soon as they arrived in front of the chief they swore frantic loyalty and devotion to the Mukama, adding the hope that he would cut off their heads if they ever ran from his enemies. Finally, kneeling before him, they held out their wands that he might touch them. The day's ceremony ended with a number of girls performing an animated dance.*

Many more interesting features can be found in the books of these two explorers.† For instance Grant mentions that between Karagwe and the Victoria Nyanza there is a country called Uhia (Buhaya) whence the people trade with the north. They also bring coffee to Karagwe for sale in bundles covered with plantain leaf, containing two handfuls, which they sell very dearly for one necklace of beads. Another interesting detail is that Rumanyika kept at court a herd of about 400 cattle, a part of the 10,000 which may have been the total number of his stock. Speke continued his journey to Buganda in January, 1862 after he had stayed at Rumanyika's court for forty-six days, while Grant, detained by sickness, followed about four months later.

The next famous explorer to visit Karagwe was Henry Morton Stanley, an American journalist, whose journey was subsidized by two big newspapers, one English and one American. His task was to complete the work of Speke, Burton and Livingstone and to solve the remaining problems of Central African geography. The journey began from Bagamoyo in 1874 after a preparatory sojourn in Zanzibar and led via Ugogo, Urimi (Turu) the Wembere to Busukuma. The expedition arrived at the lake near Kayenze. Stanley circumnavigated the lake via the east coast to Buganda and back via the west coast.

*A similar ceremony is described by John Roscoe in his book *The Soul of Central Africa* London, 1922 as taking place at the Court of the Mukama of Bunyoro.

†T. H. Speke: *Journal of the Discovery of the Source of the Nile* London, 1863.
T. A. Grant: *A Walk Across Africa* London, 1864.

Stanley reports* about the reluctance of the people living in "Usongora" south of the Kagera estuary (which he calls Alexandra Nile), to allow strangers to land on their shore. He was once forced to leave the mainland and to row over to an island, Musira, where canoes were sent loaded with food for him. Stanley met with a fierce adventure when he wanted to land on Bumbire island. The inhabitants adopted a very hostile attitude, swinging their spears and obviously shouting menacing words and bending their bows. After a while they quietened down and decided to force the strangers to remain on the island for the time being. They later tried an assault and were repulsed by rifle fire with the loss of many of their men. Finally, Stanley succeeded in leaving the island, though he and his followers had to kill a number of pursuers who followed them in their canoes.

The explorer continued the journey and after some hardship, hunger and bad weather on the lake, returned to his camp. The circumnavigation of the lake took fifty-seven days. When a return to the coast over-land became impossible because of the threats conveyed by the chiefs of the hinterland, Stanley decided to go back along the west shores of the lake to Buganda. The Mukama of Ihangiro, Ntare II, tried to force the foreigners to return after they had pitched camp on an uninhabited island not far from Bumbire. Stanley succeeded, partly by fighting, partly by negotiating, in passing Bumbire island. Farther north he was received more amicably and Mukama Kaitaba of Kiamtwara sent a great quantity of provisions and offered twenty canoes in case the expedition should need them. When Stanley arrived at Kahyoza, Bugabo, the people were lined up in long rows on the shores of Kagya, and when he landed for a midday's rest Kahyoza promised to send ten head of cattle if Stanley and his men would agree to enjoy his hospitality for one day; they declined because they were in a hurry to land in Buganda.

Stanley entered Karagwe a few months later from Buganda, after he had decided to march to Ujiji. He camped at Kafuru as the guest of some Arabs who were living there with wives, slaves and cattle. From there Stanley visited Mukama Rumanyika in Bweranyange. He confirms fully in his description Speke's judgment on the pleasant character and extraordinary intelligence of the ruler. Stanley's steel boat which he had used on Lake Victoria was launched on the Little Windermere and a regatta was arranged between the members of the expedition in the boat and the Bunyambo in their canoes. Rumanyika, to whom Stanley judged to be sixty years old, appeared in a purple cloak, carrying a staff more than two yards long and he wore several heavy copper rings round his ankles and wrists. Drummers and pipers accompanied the chief in addition to fifty soldiers armed with spears. There was also a large group of relations and guests of various tribes. The outcome of the competition seems to have been undecided. On another day Stanley visited the hot springs of Mtagata and found there many sick people who were hoping to be cured by a bath in the water. He followed their example, but as he explained, with marked negative success. Stanley gives a long description of the tribal museum in Bweranyangi which Rumanyika asked him to visit under the guidance of an Arab from Kafuro. It is obvious that the present collection is only a shadow of what it used to be. Opposite page 475 of the above-mentioned book by Mr. Stanley can be found an illustration showing a number of the articles. Stanley's sojourn in Kafuro lasted a month and when he left in March, 1876, Rumanyika ordered some of his sons to accompany him via Buhimba to the chief of Busubi.

*H. M. Stanley: *Through the Dark Continent* London 1878.

Stanley visited Karagwe a second time in July, 1889. He had departed in 1887 from Europe with the task of bringing back Emin Pasha, the Governor of Equatoria. He had chosen a route entering the continent from the west and following the Congo River. After having met Emin Pasha near Lake Albert they both returned to Bagamoyo via Karagwe. In Karagwe changes had taken place: Mukama Rumanyika had died and Ndagara II was Mukama.* Stanley was well received in Karagwe and he says that on the road to Kafuro they (he and his people) had been permitted to help themselves to bananas and plantains. As soon as Mukama Ndagara was officially informed of their arrival, he despatched to the camp a sufficient supply of bananas, an ox, fowls, "malwa", and some loads of beans, sweet potatoes and grain. In return Stanley made him a present of a Winchester rifle and a couple of coils of wire. Stanley mentions here that Karagwe at this time stood in a certain degree of dependence to Buganda. He did not stay long this time and left Karagwe via Lake Urigi for Ihangiro, through which country they marched quickly and entered Kimwani whence they reached Bagamoyo in three and a half months.

The description of Stanley's journey is supplemented by Dr. Parke the doctor of the expedition.* He had a bath in the hot springs of Mtagata. "They are all very much used by the natives who come from very long distances for the purpose of bathing in the waters and also drinking them . . . Some syphilitic natives are here trying to wash the lues out of their system with these thermal waters". Another interesting remark refers to Kafuro: "We reached the place and camped on a site which had formerly been occupied by trading Arabs, but is now the wretched-looking wreck of a deserted settlement. All the mud-walled houses which had been built by the Arabs in the prosperous days of their trading here, are now thrown down . . . The several graves occupied by the deceased Arabs are still to be seen; and the only living relics of their residence are one lemon tree and some tomatoes, which they had planted". No exact explanation could be obtained for the decline of the place: some say that it lost its importance with the suppression of the slave and ivory trade, some assert that the Arabs left because of the rinderpest epidemic which destroyed the Karagwe cattle in 1891.†

Another expedition to carry help to Emin Pasha was arranged for by Germany in 1889 and Dr. Carl Peters was appointed as its leader‡. He started his journey from the Sultanate Witu situated on the East Coast of Africa not far from the island of Lamu. He marched through Kenya and Uganda whence he continued his journey in canoes along the west shores of Lake Victoria to Smith Sound. These canoes were big vessels with a rowing crew of 20 men or more. His first camp in Buhaya was on the island of Tabaliro to the south of the mouth of the Kagera. His reception by the Baziba was hostile, but this is not surprising if one reads the description by Peters, who writes: "I entered the village, where I intended, after turning out the inhabitants, to quarter myself . . . I directed that all cattle in sight should be driven together and taken possession of, and threatened the people that if they did not submit by the evening I would fire the neighbouring villages". Here also we hear that Kiziba paid tribute to the Kabaka of Buganda. Actually Dr. Peters received a letter from Buganda in which

*H. M. Stanley: *In Darkest Africa* London 1890.

†T. H. H. Parke: *My Personal Experiences in Equatorial Africa* London, 1891.

‡Dr. Carl Peters: *New Light on Dark Africa* London, 1891.

Kabaka Mwanga begs him to traverse the centre of Mutatembwa's country; another passage of this letter says "You will do well to set fire to Mutatembwa's capital to cause him to disappear, and to set up one of his sons in his place". The inhabitants of Tubaliro kept peace and Peters continued his journey to Makongo and next day to the Bukoba Bay. He made his camp upon a green meadow about 25 feet above the level of the Lake commanding an exquisite view of the bay. Peters liked this spot very much and thought it suitable for the establishment of a station. He writes: "Later on, in Mpwapwa, I recommended the spot to Emin Pasha for this purpose". From here the travellers proceeded to Bumbire island, where they were well received by the inhabitants in contrast to the experience which Stanley had had here more than ten years before. The next halting place was the Saswa isles whence the little flotilla crossed over to Nyegezi Mission, and finally reached Bagamoyo after a march of sixty-seven days.

Development of Bukoba Township under German Administration

After he had defeated Kahyoza of Bugabo Emin Pasha at once directed his attention to the building of a "boma". He chose the area where the Church of the Inland Mission now stands and made the plans, which were executed by his successors.* After Emin Pasha's departure the station was taken over by Lt. H. Langheld called "Bwana Muzuri" by the Bahaya, not because of his outstanding gentle character, but because he used in his speech the word "muzuri" very often. He interested himself mainly with the organization of the station, though he also still had to intervene in some of the inter-tribal affairs of the Bakama.

The German boma covered a considerable terrain which was partly fenced in by a stone wall. This wall stretched from a point beyond the church of the Africa Inland Mission in a straight line to a point near the Kassoni river and from there at right angles to the back corner of the prison (still standing today) which was situated inside the wall. Thus the boma square was walled in only on the south and west side, while the east and north sides were not fortified. The German boma faced south. The main approach was the short road from the Kanoni bridge to the top of the elevation. At the top of the slope a road to the right followed this stream on its left edge almost to the point where it runs into the lake and then continued straight on to the little elevation where the German Post Office was erected. This spot is easy to find as even now the cement blocks for the wireless tower can be seen. To the left, in the middle of the slope, a road also branches off which ran parallel to the boma wall and led into the hinterland of Bukoba.

The main entrance through the wall into the Boma was exactly on the top of the slope between the big Mitona (ficus) tree on the left and the tree of an import species (?) on the right, behind which can be perceived three big trees in a line, of which two are mangoes. These three trees were planted outside the Boma wall. Another entrance was through the west wall, not far from where the wall, if it still existed, would cross the hospital road.

*The statement of F. Stulmann in his book *Mit Emin Pasha in Herz von Africa* (Page 138) quoted by T. S. Jervis in his publication "A History of Robusta Coffee in Bukoba" *Tanganyika Notes and Records* Vol. 8, according to which Emin Pasha as German resident had coffee nurseries planted near the military station, was not confirmed by the few old men who were witnesses of his arrival and are still alive. It is more likely that his successor did this work especially as Emin Pasha's sojourns in Bukoba (twice) were short. (1890 and 1891).

Looking from the entrance of the Boma, one perceived on the right the low wall of a big well and a few European quarters, and on the left, the Boma, a two-storey building, whose first storey contained offices while the second storey was the resident's flat. Behind the present post office can still be found the stone floors of kitchen and boys quarters of the resident's flat. The little court of Mwami Evarista is the old German court of the "bwana shauri", a rank comparable with a D.O. Further on to the left one saw the court house and perhaps a corner of the prison. On the right side further on was the comparatively big hospital, now the Boma.

The present Magistrate's Court was the European Ward, the D.C.s office was the surgeon's theatre and opposite it was the Medical Officer's house (now D.C.s house) and a little further on was the S.M.s house; later the present rest house was built as quarters for the European Sub-Accountant*.

Outside the west wall some primitive houses were soon erected for the employees, mainly labourers for the boma and the stables. The Germans kept horses and mules up to 1915. They were fond of riding as this was their only outdoor sport, but they also journeyed through the district on horseback. The few old men who remember the German times also report that the Officers of the "Schutztruppe" attended parades on horseback and that they turned out in a similar way on the solemn occasions of executions which were performed in public. The last public execution took place in 1915 when Mukama Ntale of Karagwe was hanged in the open space in front of the German Post Office.

Very soon the Government demanded that the chiefs should build camps for themselves, so that they could use them as quarters during their visits to the boma and also directed them to keep there a number of runners to be at the disposal of the Resident if he wished to send a message. The first camps of this type were along the present road to the pier; for instance Mukama Nyarubamba of Ihangiro had his camp on the site where the two Coffee Board houses now stand. There was also a kiln for making bricks. Later the Bakama built their camps where the Government Hospital now stands. That was at the time when a little native village had already grown up in the area of the present bazaar.

The most important building there was a "Karavanserei" situated approximately where the Aga Khan Sports Club now stands. It was a big square building with a spacious yard. For all products brought into or taken out of Bukoba a "Hongo" had to be paid and it was collected by the employees of the Kiamtwara chiefs in this station which also served as a resting and sleeping place for travellers. The Kiamtwara chiefs had received this privilege of "hongo" from the Government.

*It may be of some interest to give a list of houses as far as they are still remembered by the old people.

German	Present No.
Doctor	2
Customs Officer	1
V. Brandes	3
August Schiele	Forestry Office
Oswald and Co.	House next to Forestry Office
Max Klein	First house on right of Mission Road
Kargorotos	Kargarotos
Societa Italiana	Lake Hotel
Schultz	Manager's House, S.B.S.A.
D.O. Bank	Plot of Dr. Williamson's House
Stuemer	Foundation of Mr. Nutti's House
A.D.O.	5. On top of

The other bakama collected their "hongo" on certain ferries at:—

	Kyangabasa	(Gombolola Minazai)
Kianja	Kalebe	(Gombolola Rwagati)
	Kabakoba	(Gombolola Muhutwe)
	Kishara	(Gombolola Kizigo)
Kiziba	Kaigembe	(Gombolola Bugandika)
	Nkenge	(Gombolola Kitobo)
Ihangiro ...	Ikondo	(Gombolola Buleza)

At all these places there were posts consisting of a clerk and a few rugaruga. Payments were, for:—

a small load 20 cowrie shells (simbi)
a big load 25 cowrie shells (simbi)

Every man who passed had to pay 5 simbi. Arab and Indian traders paid in beads by arrangement.

When Bukoba became a garrison of a "Schultztruppe" Company, the barracks were on the plots on which are now built the houses of the junior service along the hospital road. (The present police barracks were built by the British Government).

The market was laid out where the Co-operative Union buildings now stand. It was quickly surrounded by the shops of Indians and Arabs, of these the shop of Abdul Karim still stands. The market was approached by a road running along the back of the prison building because the road which connects the bazaar with the lake shore at present did not exist and the terrain was a swamp. The market and its shops were shifted to the present site of the bazaar in about 1918 when the Africans were compensated for abandoning their houses. They moved themselves to the present site of the African quarters.

Lt. Langheld stayed about one year in Bukoba and was relieved by Lt. Hermann who remained for more than two years as Resident of the station. These officers did not regularly visit the inland areas, but called the chiefs to Bukoba if they wished to discuss administrative affairs with them. They made safaris only to mete out some punishment or for the election of a new chief: on these safaris they were accompanied by a number of soldiers. (See page 42).

The Germans had no regular boat connection between Mwanza and Bukoba. Europeans were rowed along the coast. Later a steam boat came from time to time to Bukoba from English territories but it could not come near the land and had to anchor out in the open water. Native boats went out to fetch passengers and loads.

The Bakama were told that any important event occurring within their chiefdoms had at once to be reported to the boma; thus a continuous traffic developed between the boma and the residences of the chiefs. Mukama Kahigi of Kianja succeeded from the very beginning of the German rule in becoming *persona gratissima* at the boma in Bukoba.

Lt. Hermann's successor was Hpt. Richter called by the Haya "Bwana Korongo", who arrived in Bukoba about 1896. His second in command, Lt. v. Kalben, called "Bwana Kama", died in 1896 and was buried in the cemetery near the present Boma. At this time neither the German hospital nor the market was

laid out, so that the cemetery was quite a distance from the then boma. The cemetery remained where it was even when it later became unusually close to the hospital and market. Hpt. Richter had three tours in Bukoba interrupted by leave. He was the first officer who regularly visited the district.

Bwana Korongo's successor was Hauptmann, later Major Stuemer ("Bwana Sitima") (1903-1916); he remained resident of Bukoba until the final departure of the Germans. Other officers who served under him and whose names are still remembered were:—

Lt. v. Behring — Bwana Mbelenge; he was also called Bwana Irabira because he always walked like a soldier on parade.

Lt. v. Wulffen — Bwana Kinyonga—Mr. Malicious.

Lt. Godovius — Bwana Lazima—he used the word lazima frequently in his speech, especially in the sentence "Lazima utapigwa—you must suffer corporal punishment".

Hpt. Schlobach — Bwana Shoroba or Shorohobaha—who deputised for Spt. Stuemer when he went on leave.

? Mabale Gasagandi—the strong hitter.

Some of these names were obviously chosen by the Haya after a certain type of experience.

An event of great importance was the visit of Duke Adolph Frederick of Mechlenburg in 1907 who started his expedition into the interior of Africa from Bukoba*.

*He writes on page 9 of his book *In the Heart of Africa* 1907/1908 "Whereas the Wasukuma, who are in considerable demand as bearers, make great pretensions and must receive their eight rupees monthly in addition to free food and tent supplies, cooking pots and woollen blankets, the Wahaia are content with a wage of four rupees, apart from allowances.

A PIONEER TANGANYIKA JOURNALIST

Martin van Jaarsveld and his Publications

By Barclay Leechmann

Mrs. M. van Jaarsveld has kindly presented to the Territory through the library of the King George V Memorial Museum, a complete set of all her late husband's publications in Tanganyika, including *The Tanga Post*, *The Tanganyika Review* and *The Planter*. This, which is believed to be the only complete set of these papers in existence, is an interesting addition to the library's collection of Africana and should be valuable to the future historian of East Africa. It is felt, therefore, that some note of these papers and of their producer will be of interest, and should be put on record.

The late Martin van Jaarsveld, a South African of burgher descent, but intensely British in outlook and loyalties, was one of that old school of printer-journalist-pioneers to which so many of today's well-known American and Dominion newspapers owe their origin. He first came to East Africa with the South African forces in the war of 1914-18 and, having decided to settle in the newly-occupied territory that was to become Tanganyika, he returned with his wife (an Englishwoman) after his discharge from the army. He became associated with the late Alexander Davis (owner of the then important, but now defunct, Kenya paper *The Leader*) in the establishment of a business known as "The East Coast (Africa) Printing and Publishing Co." and came to live in Tanga. There he managed to get occupation of the building that had previously housed the pre-war German paper *Die Usambara Post* and to acquire so much of the old printing plant that had not been commandeered for the Government Press. With these he produced the first English newspaper to be published in the Territory—*The Tanga Post and East Coast Advertiser*.

The Tanga Post, proclaiming itself to be "The Organ of the Conquered Territory" (later changed to "The Organ of Tanganyika Territory") was a weekly, printed with the old German type, on mechanical wood pulp paper, in Royal folio size and sold at twenty-five cents of an East African rupee. The first issue appeared on September 6th, 1919, the main items of news being the death of General Botha and Mr. Lloyd George's announcement that the trial of the ex-Kaiser would be conducted in London. The paper was well supported by advertisers and readers and appeared regularly and successfully for nearly two years, but the post-war slump of 1921 caused the removal of so much advertising that it had to be brought to an end. The last issue appeared on 25th June, 1921, and contained an announcement that an offer had been accepted from Mr. Davis to incorporate the *Tanga Post* in the coast supplement of *The Leader*. In fact, however, the paper died finally with that issue.

After a short period in journalism in Mombasa, van Jaarsveld bought a coffee estate outside Arusha and for the next few years his activities were confined to developing this property. The call of his old trade, however, was insistent, so early in 1930, he bought some new printing plant, which he set up in a building on his estate, and opened a jobbing printing business under the name of "The Northern Province Press". Very soon, partly because of the need for an economic

medium for his press, and partly because the journalist in his make-up demanded an outlet, he began to produce a regular advertising medium which he called *The Tanganyika Review*.

This was published monthly, the first number appearing in May 1930. It was printed on mechanical woodpulp paper and made up in foolscap folio single. For its first year it was distributed gratis. The *Review* naturally consisted chiefly of advertisements but from the beginning it carried a correspondence column, which was kept as lively as one would expect of a paper published in Arusha, an editorial and a not inconsiderable coverage of local news items. With its second number the paper proclaimed itself to be "The Official Organ of the United Associations of Arusha and District". Later, technical hand-outs from the Department of Agriculture were included and, beginning with the issue for December 1930, the cover bore the slogan "The Planter's Paper". By the end of its first year the paper had expanded beyond the stage when it could continue to be issued gratis so from May 1931 it was put on sale at 35 cents a copy or Shs. 5/- per annum, post free. With that issue also began the regular photographic supplement, the first pictures were of a Rugby match at Arusha between a representative Northern Province side and a visiting team from the Railway Rugby Club of Nairobi. It is of interest that one of the Northern Province players was Mr. D'Oyly John, since grown to great fame as a painter. By April, 1932, the *Review's* cover bore a second slogan—"The only illustrated paper in Tanganyika".

By the end of its second year the success of *The Review* determined van Jaarsveld to replace it by a larger and more ambitious paper which he proposed to call *The Planter*. It was his original intention to continue the *Review* until everything should be ready for the launching of the new paper, but this, apparently, proved to be impracticable and the *Tanganyika Review* came to a somewhat abrupt end with the first number of its third volume—May, 1932. The photographic supplement to that last issue carried pictures of the laying of the foundation stone of Arusha's first English church—Christ Church.

There was an interval of four months, until September, 1932, before there appeared the first number of *The Planter*, described as "Incorporating the Tanganyika Review", and as "An Illustrated Monthly Journal devoted to the interests of the Coffee, Sisal and Farming Industries in East Africa".

The Planter was of the same dimensions as the *Review* but was printed on imitation art paper and carried a greater number of pages. Illustrations were scattered profusely among the letterpress and a special feature was made of informative technical articles on agricultural matters by members of the staffs of the Department of Agriculture or the Amani Research Station and others. The first number contained an introductory article which carried photographs of van Jaarsveld himself and of Mr. James Thomson, described as assistant editor and advertisement manager. The article announced the paper as:—

> "A helpful journal whose chief aim is the advancement of East Africa's Basic Industries by the dissemination of useful information culled from various sources in the hope that many of the young Settler Communities may avoid pitfalls that have proved costly to earlier Settlers and from which it is hoped that these latter may derive no small benefit."

The Planter was, deservedly, a success and, although its news items dealt almost exclusively with the Northern Province, its sale rapidly spread over the greater part of Tanganyika and into Kenya. It continued to be published from Arusha until March, 1934, when his health made it advisable for van Jaarsveld to move to the coast. He therefore transferred the headquarters of the Northern Province Press to Tanga, leaving a branch at Arusha. From the issue for April, 1934, until its demise *The Planter* was printed and published in Tanga.

The Planter continued in its monthly form until the end of 1937 when van Jaarsveld decided to embark on the bold venture of converting it into a weekly newspaper of the same size and format as the old *Tanga Post* but on a better quality newsprint and with a greater coverage. Accordingly, in December, 1937, the monthly *Planter* ceased with No. 4 of Vol. VI, and on February 4th, 1938, there appeared No. 1 of the new weekly *Planter and Tanganyika Advertiser*.

In its new guise the paper retained many of its old features but emphasis was on a generous supply of Reuter's news cables, syndicated articles and news photos. A feature of interest in regard to the local history of both broadcasting and journalism was the back page which, except for a double column of advertisements, was devoted to the B.B.C. programmes for the forthcoming week.

The Planter continued as a weekly for only five months when it became apparent that it could not succeed in that form in the circumstances of the time. The twenty-second issue, appearing on July 1st, 1938, contained an announcement that the paper would not appear again as a weekly but would revert to its previous monthly form. In August *The Planter* re-appeared in its old form as No. 5 of Vol. VI—just as if there had been no break in its monthly publication.

The paper flourished for another five years, maintaining the character of a farmer's journal despite difficulties brought by the outbreak of war although more and more material had to be drawn from Ministry of Information handouts. The most serious difficulty was the supply of paper and this at last became insurmountable. The issue for March, 1943, which completed *The Planter's* tenth volume, contained the notice of the paper's final suspension. And so died, lively and solvent to the end, the last of the van Jaarsveld publications, each of which had played a useful, constructive part in the life and development of the Territory.

After the war van Jaarsveld sold the Northern Province Press (which, under its later owners, is still a flourishing business) and, as his health required, returned to his native South Africa where he finally settled in the beautiful little town of Ceres, the centre of one of the fruit growing areas of the Western Province of the Cape. There he built a house and started yet another jobbing printing business which he called "The Western Province Press". Despite seriously failing health he managed to get this business well established before his death in 1954.

Mrs. van Jaarsveld, who, throughout, was closely and actively associated with all her husband's enterprises, and is well known in Tanganyika, still owns the Western Province Press and lives in the house at Ceres which, appropriately, and in memory of their East African days, they named "Kilimani".

BUTTERFLIES OF THE NJOMBE HIGHLANDS

By L. A. Haldane

This paper is based on spasmodic collecting done at week-ends and on foot safaris during thirty months spent in the Njombe District; it does not pretend to be exhaustive though it is hoped that it gives a fairly balanced picture of the butterflies of the region. This region is strictly confined to the highland areas (roughly 6,000 feet and above) since any extension in a downward direction would have immediately expanded the account to an unmanageable size. There does seem a distinct natural division between upland and highland (in general where Brachystegia country gives way to montane grassland) which falls at about this level and is marked by a rapid reduction in the variety of species and the total number of butterflies seen. This may be connected with the frost line directly, by the effect of a certain intensity and duration of frost on the insects themselves or, more probably, indirectly by the effect on the vegetation. Apart from actual frost the colder climate must have an inhibiting effect on insect life. Curiously enough however the Moths are plentiful and varied, many of the caterpillars being particularly sumptuous in form and colour, while the forests of Uwemba are frequently obscene with the dripping of hairy horrors from the trees.

Most noticeable is the lack of Whites—the many Red-, Yellow-, Orange- and Purple-tips which make such a show at lower altitudes are almost entirely missing—the chief representatives of the Family being the little yellow Euremas, but there are plenty of these. The Browns again have only a few species, but some of these are again numerous. The Acraeas on the other hand are fairly plentiful and varied and even more so are the Blues and Skippers—the 31 Blues and 15 Skippers mentioned below must be only a small part of the existing population and intensive collecting of these would certainly be rewarding. There is quite a good selection of Nymphalids but quite a few of them, particularly among the Precis group, are only represented by the odd specimen. These it seems likely are either individuals which drop out on migration or are perhaps examples of a drift up into the highlands during the dry season, a movement which is believed to occur among some other Orders.

In the forests too butterflies tend to be scarce and localized. Ten minutes' walk through forest on a sunny day at lower levels would provide as many butterflies as three or four hours in these highlands under similar conditions. Protracted searching, including an examination of the tree tops through powerful glasses, often fails to reveal more than the merest handful of butterflies. In spite of this comparative poverty the number of species is over double that found in England and includes many of interest with several species and forms not commonly met elsewhere in Tanganyika.

The highlands of Njombe lie at the north-eastern corner of Lake Nyasa and rise steeply out of the lake and out of the Rungwe District along the line of the Livingstone Mountains. After crossing a belt of mountains and deep valleys in Ukinga which run roughly parallel to the Livingstones the land levels out over the Ubena downs, the altitude varying from over 9,000 feet on the Elton Plateau in the north-west to a little over 6,000 feet in Ubena. The rainy

season falls mainly between November and May though some rain may fall on higher ground at other times; the total annual rainfall conforms roughly to altitude being nearly eighty inches in the north-west but only forty inches in Ubena. While it can be warm enough in the sun cloudy weather is not infrequent and cold damp days occur often enough in the forested areas.

For present purposes it is enough to divide the country into two main types, open grassland and rain-forest. By far the greater part of the region is covered with comparatively short grass and other small herbage which is generally burned off at one time or another during the year. Dotted about here and there in more or less profusion and often associated with outcrops of rock are small patches of bushes and trees which give protection to a wide selection of herbs. Many square miles of Ubena are now planted with Wattle and though the plantations themselves do not produce many butterflies the firebreaks make excellent hunting grounds for Acraeas, Blues and Skippers.

The evergreen forests and forest jungles (i.e. forests lacking the taller trees) occur mainly above 6,500 feet and in Ukinga tend to be small and scattered. The largest block of forest country runs south from Uwemba (ten miles south of Njombe station) for about forty miles through northern Upangwa and the Mdando Forest to the parts about Milo, but this again is broken up by deep valleys into separate sections. There are indications that the Ukinga forests are more related to those of Rungwe than to those of Uwemba which in their turn have affinities with those of Mufindi.

Although as has been mentioned above butterfly collecting in the forests can be disappointingly slow work there is in fact quite a sizable and interesting population can one by good judgment or good fortune hit off the right time and place. About a quarter of the species listed below are associated with forest or the forest edge.

ACKNOWLEDGMENTS

I am most grateful to Dr. Wallace Peters for commenting on this paper in draft and for allowing me to include his Njombe records—this has greatly improved the paper. Also to Mr. Howarth of the British Museum (Natural History) who has been good enough to identify a number of my butterflies and has been to a great deal of other trouble on my behalf. Mr. Carcasson of the Coryndon Museum has also kindly identified some additional specimens for me. My wife has been on many expeditions with me and by her sharp eye for a Blue has done much to enrich the collection.

SYSTEMATIC LIST

Unless otherwise stated the species and forms listed below are supported by specimens in my collection. The arrangement follows Seitz (The Macrolepidoptera of the World, Vols. 13 and 14, Stuttgart 1925) except the sequence of Families, and the Family *Hesperiidae* which is arranged according to Evans. The nomenclature except in a few instances follows Peters (A Provisional Check List of the Butterflies of the Ethiopian Region, London 1952). These specimens which have been identified at the British Museum are marked with an asterisk and those identified at the Coryndon Museum with a double asterisk. P followed by a number refers to the number in Pinhey (The Butterflies of Rhodesia, Salisbury, S.R. 1949) a useful and inexpensive book with good illustrations.

FAMILY *DANAIDAE*

This family is represented by only two species which are "mimicked" by the females of *Hypolimnas misippus* and *Papilio fülleborni* respectively.

Danaus chrysippus L. P. 1.

f. *chrysippus* L. Commonest all areas.

ab. *alcippus* Cr. Not common, mostly highest areas.

f. *dorippus* Klug. Fairly plentiful.

Amauris ansorgei E. Sharp.

Not uncommon in forest areas. Similar to *A. albimaculata* (P. 3) but spots on the forewing larger and less regular. Patch on the hindwing reaches base.

FAMILY *ACRAEIDAE*

A fairly numerous Family occurring throughout the extensive grasslands with one forest species.

Bematistes aganice montana f. *nicega* Suff.*

Grasslands of the Livingstone Mountains. Similar to *B. scalivittata* but the sub-apical bar yellow, more complete and further from the apex. Margin of the hindwing more clearly defined.

Bematistes scalivittata Btl.*

Common in the Ubena forests and similar areas, mostly in April. Blackish forewing with disjointed apical bar. Whitish or yellowish patch on hindwing variable in size and interrupted by interneural streaks joining the broad black margin. Base of hindwing below chocolate-brown with black spots.

Acraea johnstoni f. *confusa* Rog.*

Peters' collection, from Bulongwa.

Acraea pharsalus Ward*

High grasslands of Ukinga chiefly. A large Acraea with forewing above blackish with black apex and white sub-apical spots. Large irregular black dots on a reddish base. Hindwing, blackish base, numerous well-defined black spots on a red base medially and a narrow black margin. Below a greenish tint, black interneural streaks near the margin. The spots on the hindwing stand out clearly.

Acraea sotikensis E. Sharpe.

Grasslands of the Livingstones. Similar to *A. goetzi* (below) but reddish streak along cell of forewing and marginal band of hindwing heavily indented. Brownish streaks in sub-marginal band of the underside.

Acraea terpsichore L.* P. 7.

Grasslands round Lihogosa Swamp but generally more common below our limits.

Acraea rahira Bsd.* P. 8.

Peters' collection.

Acraea goetzi Thur.*

A common Acraea of the grasslands. Somewhat similar to *A. terpsichore* but more deeply coloured, the sub-apical band complete and the hindwing below with reddish sub-marginal streaks.

Acraea oncaea Hpff.* P. 10.

Common on Bena grasslands.

Acraea acrita Hew. P. 17.

High grasslands of Ukinga.

Acraea anacreon Trim.* P. 18.

Plentiful, mainly Ukinga grasslands.

Acraea pseudolycia astrigera Btl.*

Found round Njombe. Feeding the caterpillars was something of a problem as their food plant was scarce and apparently limited to the shade of fig trees. A variable species similar to some forms of *A. natalica* (P. 9).

Acraea insignis f. *siginna* Suff.*

High grasslands of Ukinga. Apex of forewing grey and semi-transparent with a black dot at the end of the cell. A large black patch at the base of the hindwing and a narrow black marginal band. Remainder of the upperside dull carmine.

Pardopsis punctatissima Bsd. P. 22.

Rarely.

FAMILY *NYMPHALIDAE*

The various groups of this Family are fairly well represented but in many common species only by the odd individual which may be an occasional wanderer. There are undoubtedly more Charaxes than appear in the list but owing to the difficulty of procuring suitable materials for bait they eluded me.

Charaxes brevicaudatus Sch.

A single specimen caught near Milo Forest. Also occurs in the highlands of Rungwe District at the north end of Lake Nyasa. A large deep rich blue butterfly with very short tails, but otherwise similar to *Ch. cithaeron* Fld.

Charaxes varanes Cr. P. 31.

Occasionally met with throughout the highlands where some tree growth. Also seen flying over the bare Elton Plateau at 9,000 feet.

Charaxes boueti macclounii Btl.*

A single specimen from the western borders of Ukinga and a smaller darker form from Lupembe in the east, just below our limits.

Pseudargynnis hegemone nyassae Bartel.

A single specimen from Bulongwa in western Ukinga.

Neptis incongrua Btl.

Common at forest edges in Ukinga and Ubena. Black with a white transverse bar much as *E. hiarbas* (below).

Neptis agatha Cr. P. 37.

Not uncommon and less confined to the forest edge than the preceding.

Eurytela hiarbas Drury. P. 41.

From forests of Ukinga (no spots on white bar) and from Mdando Forest (black dots on white bar).

Hypolimnas misippus L. P. 43.

Less common than at lower altitudes. Also the female form *inaria* Cr.

Salamis anacardii L. P. 46.

Seen flying over bare Elton Plateau at 9,000 feet.

Catacroptera cloanthe Cr. P. 48.

Forests near Milo.

Precis terea Drury.

Western highlands of Ukinga.

Precis archesia f. *pelasgis* Godt. P. 52.

Luwumbu in Ukinga IV, 1.

Precis tugela Trim.*

1 in Peters' collection.

Precis actia rubrofasciata Suff.*

Milo VIII and Njombe V.

Precis ceryne Bsd.* P. 54.

Peters' collection.

Precis pelarga F.

Njombe VI.

Precis octavia f. *sesamus* Trim. P. 57.

Common throughout, collected IV, VI, VIII, IX.

f. *natalensis* Stgr.

Throughout, collected IV and VII mostly.

An intermediate form was caught at Njombe VIII. These flies congregate in large numbers in sheltered spots and fly out like bats when disturbed. Commonly flying into houses.

Precis sophia F.

Rather common on the mountain grasslands of Ukinga.

Precis oenone L. P. 58.

Met with throughout, also form *cebrene* Trim. with black spots on yellow patch of hindwing.

Precis orithya madagascariensis Guen. P. 60.

Not uncommon on the grasslands. Rather variable in size and marking. A dwarf specimen collected IX.

Vanessa cardui L. P. 61.

Widespread but not very common.

Antanartia schaeneia Trim. P. 62.

Seasonally common in glades in forests.

Antanartia hippomene Hbn.

Usually found with previous species. Similar in appearance but distinguished by its smaller size, shorter tails, and the underside which has more white markings.

Phalanta phalantha Drury P. 63.

Common in grasslands, mostly IV and V. Elegant golden pupa suspended from leaves of bush and emerging V.

Issoria smaragdifera Btl.

Distinctly common at forest edges and rides and frequently resting on the ground.

Issoria excelsior Btl.*

Peters has ten of these from Uwemba but I seem to have missed them entirely.

Issoria hanningtoni Elw.

As above, but much less common. These three are similar to the English Silver-washed and High Brown Fritillaries.

FAMILY *SATYRIDAE*

(The "Browns")

Not many species are represented but the *Neocoenyra* group must total a vast population.

Henotesia ubenica Thur.*

By no means so common as *Neocoenyra*. Very similar in appearance to *H. perspicua* (P. 68) but the median line beneath curved, not straight, and the inner margin of the forewing sinuous, not straight.

Aphysoneura pigmentaria Karsch*

This dark-brown butterfly with yellow patches looks and behaves more like a Nymphalid than a Brown, the flight being powerful and direct. Only one was seen, and collected, in the Mdando Forest and was the typical form *pigmentaria*. Two seen at 8,000 feet near a bamboo grove in Ukinga, one of which was collected, was very near the form *obnubila* from Nyasaland and the Rhodesias but with even less yellow. Evidently not common.

Neocoenyra heckmanni Thur.

This is the common Brown fluttering about the edges of paths and along forest rides. Very similar to *N. extensa major* (P. 72) but without the large spots on the underside of the wing. Ab. *wentzelae* with four spots on the hindwing also occurs.

Neocoenyra fülleborni Thur.

Although this occurs quite freely in high country in the Livingstones further east in Ubena and Upangwa it appears to be confined to rather lower altitudes where it replaces *N. heckmanni*. Above brown with blue apical eye and subapical white patch, two eyes on hindwing.

Ypthima asterope Klug. P. 73.

Bena grasslands.

FAMILY *LYCAENIDAE*

(The "Blues", "Coppers", etc.)

The Blues are rather well represented in the Njombe Highlands, no great attention was paid to them but I find some twenty-seven species in my collection. An intensive search, which would be well worth making, would no doubt double or treble this list—but I suppose of collecting Blues there is no end. The great majority were found in open country.

Virachola diocles Hew. Livingstone Mts.

Virachola antalus Hpff. (P. 80) Common.

Myrina silenus F.

Hypolycaena auricostalis Btl.*

Argiolaus ? *crawshayi* Btl. Very battered specimen, run over.

Spindasis mozambica Bertol.

Anthene definita Btl. (P. 94) Common.

Phylaria heritsia Hew.

Cyclirius crawshayi Btl.*

Uranothauma falkensteini Dew.

Uranothauma nubifer Trim. (P. 97).

Uranothauma crawshayi Btl.

Mostly Livingstones and western Ukinga where fairly plentiful on paths and stream sides.

Cacyreus lingeus Cr.

Cacyreus palemon Cr.

Widespread. Curiously I have no *lingeus* though Peters found them plentiful

Castalius ertli Aur.* Milo forest.

Azanus jesous Guer. (P. 104).

Syntarucus telicanus Lang. (P. 105).

Petrelaea sichela Wallgr.** W. Ukinga.

Lampides boeticus L. (P. 106) Common.

Harpendyreus noquasa Trim.*

Harpendyrius aequatorialis Sharpe**

Peters has *H. a. vulcanica* J. and Ta.

Euchrysops malathana Bsd. (P. 110).

Euchrysops osiris Hpff.* (P. 111) Peters'.

Euchrysops barkeri Trim.* Peters'.

Euchrysops dolorosa Trim.* Peters'.

Freyeria trochilus Freyer (P. 113).

Zizula hylax gaika Trim.* (P. 115) Peters'.

Zizeeria otis F. (= *antanossa* Mab.)

Zizeeria knysna Trim.*

Actizera stellata Trim.

Actizera lucida Trim.* Peters' (P. 117).

Lycaena phlaeas abbottii Holl. Very common VI and VII.

FAMILY *PIERIDAE*

(The "Whites")

As mentioned in the introduction this Family is rather meagrely represented in our area though the Euremas are plentiful in open country and *Mylothris sagala* not uncommon in forest.

Pinacopteryx eriphia Gdt.* P. 119.

Mylothris chloris agathina Cr. P. 120.

Widespread though not very numerous. Caterpillars feeding on the mistletoe which is common on old Wattle trees.

Mylothris yulei Btl.

Forest edge near Milo. Smaller than the previous species and the forewing golden-yellow at the base both above and below.

Mylothris sagala Smith.

f. *dentatus* Btl.*

f. *dulcis* Thur.*

This is a fairly common butterfly of forested areas. Somewhat variable and forms can be multiplied easily, if not very profitably. Forewing white with variable black costal margin and deeply indented black streaks at hind margin. Hindwing yellow with black marginal dots.

Anaphaeois aurota F.* P. 125.

Catopsilia florella F. P. 137.

Throughout though not numerous except on migration. Both white and yellow females found.

Eurema senegalensis Bsd.* P. 138.

The typical and the dry season form *bisinuata* Btl. are both found.

Eurema desjardinsi Bsd.* P. 139.

Both the typical and dry season form *mandarinula* Holl. occur.

Eurema brigitta Cr.* P. 140.

All these three species are very common.

Colias electo L. P. 141.

Particularly in the high Ukinga grasslands, but found throughout. Also ab. *aurivilliusi* Kef.

FAMILY *PAPILIONIDAE*

(The "Swallowtails")

Of the five species represented four are plentiful but are all species of the forest edge except *P. demodocus*. Many groups are thus entirely missing.

Papilio fülleborni Karsch*

This fly is common round forest and forest jungle in both Ubena and Ukinga where it has a slow fluttering flight up and down the glades and often straight into the net. In appearance it is similar to *P. echerioides* figured at the back of Plate VII in Pinhey. The female is similar to *Amauris ansorgei* which occurs in the same type of country.

Papilio phorcas nyikensis R. and J.

Collected in forest near Milo but seems scarce. A black butterfly with lobed tail and a pale green bar across both wings, broader on the hindwing.

Papilio thuraui Karsch*

This butterfly occurs alongside *P. bromius* in Mufindi, Njombe and the Uwemba and Milo forests but seems to be absent from Ukinga in the west though *P. bromius* occurs there freely. Dr. Peters tells me that he found this species to be very rare but it is evidently subject to fluctuations since during 1953 to 1955 it was unusual to drive through the Uwemba forests without seeing one. They are not however easy to catch since they are up and away over the tops of the trees in a twinkling and unless feeding strongly on flowers usually elude ones net. Two females and five males were caught.

In appearance very similar to *P. bromius* but lacking the broad band across both wings and the small blue sub-marginal dots are carried up to the apex of the forewing. Below the two species are indistinguishable. Some specimens show faint traces of the broad band on the upper side as do some *P. bromius* traces of the sub-marginal dots on the forewing. The status of this species might repay further investigation.

Papilio bromius brontes Godm.*

Quite common at the edge of forests. Similar to *P. nireus* (P. 143) but the band above somewhat broader and the yellow sub-marginal spots below carried on to the forewing.

Papilio demodocus Esp. P. 144.
Common throughout.

FAMILY *HESPERIIDAE*

(The "Skippers")

A troublesome Family, troublesome to catch, troublesome to set and troublesome to identify. It contains however a number of interesting and little known species and is worth persevering with. The list below could be greatly added to by patient collecting.

Coeliades pisitratus F. P. 151.

Eretis djaelaelae Wallgr. Fairly widespread.

Spialia spio L. Bena grasslands P. 169.

Metisella metis L. Forest areas.

Metisella willemi Wallgr. P. 159

Kedestes wallengreni Trim.* Peters' (5).

Gorgyra johnstoni Btl.*
Chondrolepis niveicornis Ploetz*
Chondrolepis telisignata Btl.* Peters' (11).
Platylesches moritili Wallgr.* Peters' (4).
Zenonia zeno Trim. P. 155.
Borbo holtzii Ploetz* Peters' (1).
Borbo detecta Trim.* Peters' (9).
Gegenes niso brevicornis Ploetz* Fairly common.
Gegenes hottentotta Latr.* Peters'.

NOTE

THE BOUNDARY BETWEEN TANGANYIKA AND KENYA

It was stated recently in the Press that:

> "The Tanganyika–Kenya border is after all only a line drawn on the map by Queen Victoria to suit her German relations."

It seems a pity that this hoary old legend of Queen Victoria having given Kilimanjaro to her Grandson as a birthday present should have been revived.

In 1886 the German Chancellor, Bismark, sent for the British Ambassador, Sir Edward Malet, and informed him that he regarded Britain's attitude over the delimitation of spheres of influence in East Africa as unfriendly and that unless agreement was reached immediately he would be forced to abandon his policy of friendship with Britain and seek instead friendship with France. He then sent Dr. Krauel, a senior official of the German Foreign Office, to London with instructions to reach an immediate settlement. Krauel reached London on the 14th October, 1886, and after conferences with the Foreign Secretary, Lord Iddesleigh, agreement was reached and announced on the 29th October.

This agreement provided, amongst other things, that the authority of the Sultan over the Islands of Zanzibar, Pemba, Mafia and Lamu should be recognized. That the territory between the Ruvuma River (Mnyinjani) and the Tana should be divided into German and British spheres of influence and that the boundary between these should be:

> From the mouth of the Umba River to Lake Jipe and thence between Taveta and Chaga around the northern base of Kilimanjaro to the point where the 1st parallel of latitude crosses the eastern shore of Lake Victoria.

This boundary was agreed upon by Krauel and Iddesleigh and having regard to Bismark's threat to Malet it is not unlikely that the British Foreign Secretary had no option but to agree to Krauel's demands.

There is little to support the story that Queen Victoria gave away Kilimanjaro to Germany as a present to the Kaiser, her grandson. Wilhelm II did not come to the throne of Germany until 1888 and it is well known that the Queen's relations with her son-in-law the German Emperor were far from cordial. It is much more likely that she reacted strongly against any such suggestion as she did, a few years later, when Heligoland was surrendered to Germany in recognition of Germany's agreement to certain proposals regarding East Africa which had been put forward by Britain.

G. W. Hatchell

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BIRDS OF THE NJOMBE DISTRICT

By L. A. Haldane

INTRODUCTION

The Njombe District with its wide variety of altitude, climate and vegetation is rich in birds and Njombe itself makes a good centre for the study of different kinds of bird populations. Praed & Grant's two volumes on the *Birds of Eastern and North-eastern Africa* (*22*) now provide up-to-date information on the birds to be met with in the area but, dealing as they do with a considerable slice of the continent, the canvas is necessarily broadly drawn and may suitably be supplemented by more local accounts.

Several collections have been made in the district, notably by Fülleborn (whose birds were described by Reichenow) in the nineties of last century, Bangs and Loveridge in February 1930, both of these in Ukinga, and by Lynes in the grasslands and forests of Ubena from November 1931 to January 1932. Lynes' paper (*14*) is particularly valuable for its description of the country and general discussions as well as for its breeding records and list of birds collected. It has been drawn on fairly freely in this present article as unfortunately it is not now very readily procurable. I am also indebted to Mr. Wenban-Smith for allowing me to make use of his article in the Njombe District Book. My own sight records over a period of two and a half years fill in a few corners. Mr. Moreau has been kind enough to read through this paper in draft and I am most grateful to him for a number of suggestions for its improvement.

GEOGRAPHY

The Njombe District extends between parallels 33 degrees 46 minutes and 35 degrees 32 minutes East and 8 degrees 37 minutes and 10 degrees 32 minutes South. The land area is about 8,000 square miles disposed as a rough semicircle with a base of 120 miles lying S.E./N.W. along the Great Nyasan Rift Fault and the circumference touching the Mbeya, Iringa, Mahenge and Songea borders. The Livingstone Mountains mark the line of the fault, their westerly face shelving away steeply into the Rungwe District and into Lake Nyasa where the drop is in places over a mile deep and so abrupt that even a footpath along the shore becomes an impossibility. With heights of over 9,000 feet above sea level in the north-west the Livingstones gradually decline along a series of grotesque peaks to the plain of the Ruhuhu river at 1,600 feet above sea level, with the Matengo Highlands of the Songea District rising on the further side.

In the north-west corner of the district lies the Uwanji shelf at between 6,000 and 7,000 feet above sea level, cut off from the rest of the district by the Elton Plateau and the great sweep of the Kipengere Mountains with their peaks as high as those of Mt. Rungwe. Uwanji's natural outlook is towards the Poroto Mountains and towards the Usangu Plain two thousand feet below to the north. The Elton Plateau itself, a rolling grassland between 8,000 and 9,000 feet above sea level overlooks a belt of deeply dissected mountain grassland

running south-east for seventy miles, parallel to the Livingstones, through Ukinga into northern Upangwa. There is grand scenery here with vast valleys up to 2,000 feet deep.

East of this the centre of the district is mainly taken up with the Ubena downs with more open valleys and a general altitude of about 6,000 feet above sea level, geologically a granitoid shield. North of the downs, except for a corridor running north-east into the Iringa uplands, the altitude falls very gently through brachystegia woodland to dry acacia country at 4,000 feet and under. In Upangwa in the south the drop into the valleys of the Ruhuhu and its tributaries is abrupt.

On the eastern boundary the downs slope down to some 5,000 feet above sea level, and then break up into a tumble of small hills overlooking the Kilombero valley.

CLIMATE

The rainy season falls almost entirely between the months of November and May though some rain can usually be expected in August at places such as Uwemba and Lupembe. The highland areas, roughly 6,000 feet and above, are also subjected to prolonged mists and low cloud which help to conserve the moisture though equally the strong south-easterly winds which blow across the downs for much of the dry season must have the opposite effect.

Precipitation agrees fairly closely with altitude being highest (sixty inches to eighty inches) in the mountains of the north-west, declining to forty inches a year on the Bena grasslands, and to little more than twenty inches in the low country to the north and south. Lupembe in the east, overlooking the valley of the Kilombero catches some sixty inches a year and is an exception to the general picture.

As is to be expected in a district with an altitude range of over 8,000 feet the variations in temperature are considerable. Down on Lake Nyasa at 1,600 feet the climate is pleasant in the cool season in July and August but becomes very trying from November onwards, particularly as the high wall of the Livingstones shuts out the breeze and reflects the heat of the afternoon sun. Up in the mountains on the other hand the sunniest days are scarcely more than warm while the nights are frequently bitter. Fourteen degrees of frost have been recorded by the Forestry Department on the Elton Plateau in a not exceptional year while in the cold snap of August 1955 over fifteen degrees of frost were experienced on the Bena grasslands; this turned the leaves of most of the trees and bushes along the valley-bottoms brown overnight and killed off some acres of young wattle. As by midday the temperature may have risen to nearly 70 degrees F. it will be seen that there is a considerable diurnal variation in the cool season. This is much less marked at other times of the year and is always moderated by cloudy weather or the protection afforded by vegetation and other cover.

HABITATS

Mountain Forest.—It seems possible that in comparatively recent times rain and cloud forest covered a large part of the district to the east of the Livingstone Mountains and including what is now the Bena grasslands. Volcanic activity (a layer of volcanic ash is traceable at least as far east as Njombe) and later man's axe and fire, have left only sporadic areas of true rain forest which in the main is confined to the wetter country above 6,500 feet. So far as has

been ascertained much the same species of birds occur in the forests about Mt. Rungwe and throughout the Njombe highland forests. The Olive Pigeon, Livingstone's Lourie, Moustached Green Tinker-Bird, Olive Woodpecker, Fischer's and Mountain Greenbuls, White-tailed Crested Flycatcher, Starred Bush-Robin, Bamenda Apalis, Black-fronted Bush Shrike, Green White-eye, Double-collared Sunbird and the Dark-backed Weaver are typical of the middle and upper levels of the forest while nearer the ground occur Gurney's Thrush, White-throated Robin-chat, Spot-throat, Fülleborn's Black Boubou, Red-faced Crimson-wing and Thick-billed Seed-eater. The Silvery cheeked Hornbill and Bartailed Trogon which occur in Ukinga have not yet been recorded in the mountain forests of Ubena and Upangwa. Similarly the Mountain Greenbul and Gurney's Thrush seem to be represented by different races in the west and in the south.

The Ukinga forests are generally small and disjointed. The remnants however are numerous though dwindling as one goes southwards down the Livingstones. They are helped out by old and neglected plantations, mainly of wattle and eucalyptus, which have protected the regrowth of indigenous species and now present almost the appearance of wildwoods and provide a suitable environment for forest birds which are not too specialized in their requirements. The biggest forest in Ukinga (about 15 square miles) is cut off from the rest by the Elton Plateau and runs from the head of the Ndumbi valley at 8,000 feet down towards the Usangu plains and might have an interesting bird population; so far it seems to have been neglected.

On the Ubena-Upangwa border, including Mapala where Lynes worked and Uwemba, there are some forty square miles of rain forest (including the Mdando Forest of over 12,000 acres) covering most of the higher land over a distance of forty miles, the general level being some 6,500 to 7,000 feet. The irregular shape of the forests gives a long forest/grassland boundary which encourages birds of the forest edge such as Doves, Flycatchers, Swallows, Rough-wings, Tits and Sunbirds. Many of the birds of the lower levels of the forests can also be found in the forest-jungles, an environment similar to that of the true forest but lacking the taller trees and which is not uncommon round Uwemba. Where the forest has been cut down for cultivation regeneration to a dense tangle is fairly rapid but this is usually colonized by such birds as the Yellow Flycatcher and the Cinnamon Bracken-Warbler rather than by birds of the forest undergrowth.

At 5,000 feet near the eastern border the high rainfall area of Lupembe, in many ways similar to that of Mufindi in the Iringa District to the north, overlooks the Kilombero Valley and supports the Ditima forest of about two square miles together with a much greater extent of near forest and forest jungle. Little seems to be known of the birds there, and this country might well repay investigation as there is not much evergreen forest left at this altitude.

Mountain Grassland.—A large area of the district lying between 6,000 and 8,000 feet above sea level is open grassland, in Ukinga mostly as the sides of the great valleys, in Ubena as a rolling downland intersected by broad valleys. The grass tends to be tufty and have a thick mat of last years growth below it except where fire has burned it off. The grass is never of great height and on the poorer soils is scanty and mixed with dwarf herbage. All areas are subject to erratic firing but except for certain parts are but lightly grazed. The Wing-snapping

Cisticola and Temminck's Courser are typical of the shorter growth as are the Yellow-throated Long-claw, Larks and Pipits of the taller. Where granite outcrops appear there is usually an association of shrubs and longer grass where the Freckled Nightjar or Wailing Cisticola occur. Not very many species inhabit the pure grasslands but quite a few rover over them fairy frequently and include Falcons, the Black-shouldered Kite where there is a handy perch, Jackal Buzzard, Brown-breasted Harrier-Eagle, Pallid Harrier, Spurfowl, Quail, Jackson's Bustard, Stonechat, Swallows and Roughwings, Banded Martin, Pied Crow and Malachite Sunbird.

There are several swamps in dips on the downs, the largest being the Lihogosa ten miles north-east of Njombe. Various theories have led people in the past to try and vary the water level but the result has been to leave it much as it was when Lynes visited it—a patch of open water surrounded by dense tall spike rushes and bordered with intermittent marsh. The Spurwing Goose and four species of duck inhabit the area. A small variety of Herons, Coots, Jacanas and Waders have been collected from it but on the whole it is disappointing, and anyway most uncomfortable to work in. Seasonally the Marsh-Harrier can be seen quartering the swamp and the Pectoral-patch Cisticola has its breeding ground there. Golden-crested and Wattled Cranes prefer the more open swamplands or along the rivers.

The main streams are perennial, clear and rapid with gravelly beds and tumbled rocks in their courses and are often bordered with willow-like shrubs or small trees. Here are found the occasional Hadada Ibis, Black Duck, Common Sandpiper, the Giant and Malachite Kingfishers and the Mountain Wagtail. Holes of the White-fronted Bee-Eater occur in colonies in the sand banks, the Slender-billed Starling nests in the cascades of the Ruhuji and Hagafiro falls and the nest of the Spectacled Weaver overhangs secluded reaches.

The slower stretches of the main streams and many of the tributaries are bordered by alluvial flats, even in the Ukinga mountains. Here a lush growth of grass and herbage is watered by slow oozings from the valley sides and the White-browed Coucal, Fan-tailed Warbler, the Churring and Black-lored Cisticolas, Moustache Warbler, Black-cap Bush-Shrike, many Weavers, Red-shouldered and Marsh Whydahs and parties of Waxbills abound.

Though there are large areas of pure grassland there is a good deal of cover one way and another. Apart from small clumps of forest trees left from *pietas* or for other reasons the deep layer of subsoil has in the past here and there eroded and on the sides of the valleys so formed thick growths of shrubs and small trees have taken root and withstand all but the fiercest fires. In the past thirty years much planting of exotics has taken place in small or medium parcels all over the grasslands. These provide harbourage for a surprising number of woodland birds; incidentally these small mixed packets, not very carefully tended, are more favoured than the larger pure stands of plantation timber.

Njombe itself is very favourably situated beside the Ruhuji river and well surrounded by trees which, except for a small patch of indigenous forest at the foot of the falls, have all been planted within the last twenty-five years. Nearly three-quarters of the total district list must have been seen within a mile of the Ruhuji bridge at one season or another of the year, the main exceptions being deep-forest skulkers and birds of the dry lowland bush or lake shore. Of those

birds most frequently seen in the neighbourhood one might name the Blue-spotted Wood-Dove; White-fronted Bee-eater; Pied and Mountain Wagtails; Dusky, Slaty, Yellow and Paradise Flycatchers; Stonechat; White-browed Robin-Chat; Fan-tailed Warbler; Brown-headed Apalis; Swallows and Rough-wings; Tropical Boubou; Hehe Fiscal; Black Tit; Pied Crow; White-necked Raven; Slender-billed Starling; Malachite and Buff-breasted Sunbirds; Sparrow; Waxbills; Pin-tailed Whydah and Brimstone Canary.

The Elton Plateau lying between 8,000 and 9,000 feet is a more specialized habitat. Rather short grassland on a black volcanic soil undulating gently between low hills and with numerous small streams and looking as if it should be good sheep country. There is practically no cover, though present softwood trials may alter this, but at the beginning of the rains it is a mass of flowers. The bird population is rather limited in species and consists mainly of Francolin (possibly Shelley's), Cape Quail, Rufous-naped Lark, Wheatear, Stonechat, Malachite Sunbird (when the flowers are in bloom) and the Marsh Whydah. There are doubtless Warblers and others which have been overlooked.

Woodlands.—North and south of the high grasslands occurs an expanse of brachystegia woodland beginning at altitudes equal to or greater than those of the adjacent grasslands and, in the north, gradually sloping down to the dry acacia thorn country along the Great North Road between the Kipengeres and the Usangu plains. In the north-east a long ridge of higher ground runs out to Makambako and to the uplands of Iringa. To the south the fall is more abrupt into the valley of the Ruhuhu and its tributaries. Much of this woodland in the north is of poor growth, little better than scrub, and here and there gives way to stretches of open grassland particularly in the neighbourhood of Wanging'ombe. The Bare-faced Go-away Bird, Little Bee-eater, Flappet Lark, Crombec, Eremomela, Drongo, Black Boubou, Brown-headed Bush-Shrike, Mariqua Sunbird and Cordon Bleu are usual birds in the higher northern stretches while lower down are found the Secretary Bird, Guineafowl, Thicknee, various Plover, Laughing and Long-tailed Doves, Lilac-breasted Roller, Ground Hornbill, Magpie Shrike, Superb Starling, Red-headed Weaver and Paradise Whydah. Again below that in the dry acacia such birds as the Red-billed and Grey Hornbills, the White-crowned Shrike and the Ashy Starling are the most noticeable.

In the south in Upangwa the woodlands are generally better grown and are less inhabited and cultivated and contain additional woodland species such as the Violet-crested Lourie, Brown-headed Parrot, Trumpeter Hornbill, Pallid, Black and Chinspot Flycatchers, Cuckoo Shrikes, Helmet Shrikes, Cinnamon-breasted Tit, Black-headed Oriole and Scarlet-chested Sunbird.

Lake Shore.—The Njombe section of the shore of Lake Nyasa is formed by the rift wall of which the Livingstone Mountains are the lip. Covered with sparse woodland on their western face they plunge down from a height of 7,000 or 8,000 feet through the waters of the lake. Violent storms clear earth and vegetation from the junction of lake and land and the constantly changing water level discourages the formation of a definite shoreline. Although this level is at present declining it is still higher than at the close of the last century—witness the submerged gardens of Lupingu Mission and the drowning of much of Alt Langenberg.

Although this description may sound forbidding the birds of the woodland are unaffected and at the water's edge Cormorants and Darters rest on the rocks, the Fish-Eagle nests on precariously anchored Baobabs and fishes far across the lake while the Pied Kingfisher hunts nearer the shore. The picture is also relieved by the occasional river which has managed to find its way through the mountains and has brought some alluvium to support a vigorous growth of reeds, grasses and trees. The greatest of these is the Ruhuhu delta, some few miles across, in the extreme south. Lupingu and Makonde each have a fair-sized plain a mile or so across but the few others such as Malisha and Lumbila (Alt Langenberg) are tiny. When all are added together they do not amount to much in ninety miles of coastline. Where such growth does exist however there is a fair population of Herons, Egrets, etc., among the reeds, Pied and Giant Kingfishers flying along the shore, Waders at the water's edge and on dry land immediately behind the Little Bee-eater, Crowned Hornbill, Wattle-eyed Flycatcher, Cliff Chat, several varieties of Weavers and Canaries and the Cinnamon-breasted Rock-Bunting. The list is not a great one compared with other parts of Lake Nyasa, fish supplies too are apt to be chancy along the Njombe coast which limits the number of fish-eaters.

The dams of northern Ubena can be noticed briefly. In the past few years a number of small dams have been built here and there and serve as foci for Ducks, Geese, Plover and Waders. Where the level is fairly constant as at Makambako reedbeds have formed and Grebes, Moorhens, etc., can be found with Weavers nesting above. The birds here make an interesting addition to the countryside and it is to be hoped that they will be protected.

MIGRATION AND POPULATION

Palaearctic migrants recorded include the following:—

White Stork, Peregrine Falcon, Hobby, Marsh and Pallid Harriers, Caspian Plover, Little Stint, Common, Green, Wood and Marsh Sandpipers, Cuckoo, Bee-eater, Common Swift, Yellow Wagtails, Tree Pipit, Spotted Flycatcher, Wheatear, Whinchat, Whitethroat, Garden Warbler, Blackcap, Great Reed-Sedge and Willow Warblers, Swallow, House-Martin, Red-backed Shrike and Golden Oriole.

Lynes (*14*) has noted that several birds of the wooded uplands such as the White-fronted Bee-eater, Black-collared Barbet, Chinspot Flycatcher and Crombec can only be found in the highlands along the rivers, where he found them breeding, and suggests that they may be extending their range upwards. It would be interesting to know how far, if at all, such birds are succeeding in spreading from the river cover now that the downs have been so sprinkled with small copses and rough plantations which were practically non-existent in his day. Apart from breeding species the dry season brings into the highlands such birds as the Lizard Buzzard, Little Bee-eater, Groundscraper Thrush and Puff-back Flycatcher which do not otherwise occur outside the uplands.

It seems a possibility that as a result of volcanic and tectonic action in geologically recent times much of the highland area at the head of Lake Nyasa has had to be recolonized mostly from the north-east along the line of the uplands and in a lesser degree from the west. Northern Nyasaland is no great distance away, on a clear day in the Ukinga mountains the Masuku Mountains look remarkably close, but as Benson (*11*) has shown there are considerable differences

between the birds of N. Nyasaland and of S.W. Tanganyika and one is frequently struck in the distribution maps in Praed and Grant (*22*) how often the limit of birds of western Tanganyika passes along Lake Tanganyika, etc., and holds to the western side of Lake Nyasa while the head of the lake appears at the tip of a distribution wedge driven down from N.E. Tanganyika. Apart from *Alethe lowei* there seem to be no species of birds peculiar to the mountain forests and comparatively few races, at least less than one would expect from a mountain area hedged about by water or moderate-altitude savannah.

Some 60,000 acres of the Bena grasslands are due to be planted with Black Wattle within the next few years and there are already extensive plantings seven or eight years old. Although this will not seriously limit the area of the grasslands, which are more likely to be affected by the control of tick-borne diseases of cattle, it must make a considerable difference to the countryside. As far as has been observed so far these plantations seem not very attractive to birds. While the trees are young the usual grassland birds can maintain their position but when the trees are bigger little is met with in the silent interior beyond the Red-eyed Dove, though Bee-eaters feed on the outskirts on insects attracted by the flowers and parties of the Pied Crow arrive to deal with caterpillar infestations. The suppression of the undergrowth and lower branches does not leave much cover though one would have expected the canopy to have supported more of the insect-eating fraternity. A quantitative analysis of the birds of a particular coupe over the period of a rotation would be of interest. An attempt was made to stock one plantation with Pheasants but they were unable to withstand the assaults of numerous vermin and soon disappeared.

BREEDING

There are not many breeding records from the district, those in the list being mainly from Lynes (*14*). Breeding seasons vary from one part of the country to another and local records of seasons, clutch sizes and so on, especially of the same bird from different altitudes, would be useful.

SYSTEMATIC LIST

In this list the order and nomenclature of Praed and Grant (*22*) have been followed. Only specific names have been used except where specimens have been collected and compared. Racial synonyms have also for convenience been brought to accord with Praed and Grant's system except in a few cases which are discussed. Some Kikinga names from Loveridge (*8*) have been included in brackets. References are given thus *7*.

Poliocephalus ruficollis—Little Grebe:

A few in Lihogosa Swamp *14* and Makambako Dam *10* where open water.

Phalacrocorax carbo—White-necked Cormorant:

Lake Nyasa at Ruhuhu and Lumbira estuaries *10, 24*.

Phalacrocorax africanus—Long-tailed Cormorant:

Lihogosa Swamp and occasionally along Ruhuji River, *14, 24* also commonly Lake Nyasa *10, 24*.

Anhinga rufa—Darter:

Fairly common shores of Lake Nyasa *10, 24*.

Ardea Cinerea—Grey Heron:

Mouths of the Ruhuhu and Mchuchuma rivers Lake Nyasa *10*, *24*.

Ardea melanocephala—Black-headed Heron:

Occasional wanderers in Ubena *14* but mainly in Ukinga where well established colony Magoye and another started at Bulongwa in 1946/47, *24*. This latter still going strong in 1955. Nest building in tall eucalyptus trees XI and young clamorous on nests V, *10*.

Ardea goliath—Goliath Heron:

Mbongo River, Manda, Lake Nyasa, *24*.

Pyrrherodia purpurea—Purple Heron:

Casmerodius albus—Great White Egret:

Mesophoyx intermedius—Yellow-billed Egret:

A few of each seen at Lihogosa Swamp *14* also last river mouths Lake Nyasa, *10*, *24*.

Egretta garzetta—Little Egret:

Singly along edge of Lake Nyasa *10*.

Bubulcus ibis—Buff-backed Heron:

Flocks near the Lihogosa Swamp XI, XII, *14* and also northern bush country, *10*, *24*.

Ardeola ralloides—Squacco Heron:

Flocks at Lihogosa Swamp XI, *14*, also occasional singles river mouths Lake Nyasa, *10*, *24*.

Scopus umbretta—Hammerhead:

At nest Lake Nyasa VI, *24*, and at river pools G.N.R. *10*.

Ciconia ciconia—White Stork:

Winter visitor *14*, *24*.

Sphenorhynchus abdimii—Abdim's Stork:

Occasional visitor, *24*.

Anastomus lamelligerus—Openbill Stork:

River mouths Lake Nyasa and occasional flocks in transit across the district. *10*, *24*.

Ibis ibis—Wood Ibis:

Occasionally open land along Great North Road 10.

Threskiornis aethiopicus—Sacred Ibis:

Transitory at Lihogosa Swamp *14*, not common *24*.

Hagedashia hagedash—Hadada:

An occasional bird on Ruhuji River, *14*.

Thalassornis leuconotus—White-backed Duck:

Makambako Dam, *24*.

Aythya erythrophthalma—African Pochard:

Wanging'ombe Dam, *10*.

Anas undulata—Yellow-billed Duck:

Common Lihogosa Swamp, *14*, *24*, also on northern dams, *10*.

Anas sparsa—Black Duck:
Ruhuji River, *10*, *14*, *24*, also Ukinga mountain rivers, *24*.

Anas punctata—Hottentot Teal:
Lihogosa Swamp, *14*, *24*.

Anas erythrorhyncha—Red-bill:
Lihogosa Swamp *14*, and northern dams, *10*.

Sarkidiornis melanotus—Knob-billed Goose:
Northern dams, *10*.

Plectopterus gambensis—Spurwing Goose:
Common Lihogosa Swamp, *10*, *14*, *24*.

Sagittarius serpentarius—Secretary Bird (Ngarungwala):
Not uncommon in the more open parts of the northern bush country, *10*, *24*.

Trigonoceps occipitalis—White-headed Vulture:
Uwanji, probably up from Usangu plains, *10*.

Falco peregrinus—Peregrine Falcon:
Falco biarmicus—Lanner:
Falco subbuteo—Hobby:

These three on northward migration first week in February, *14*.

Falco cuvieri—African Hobby:
A pair of what may have been this species busy about nest in tall eucalyptus in Ukinga mid-February, *10*.

Milvus migrans—Kite (Ngama):
Common throughout

Elanus caeruleus—Black-shouldered Kite (Kihuwiwi):
Common in the higher more open country where suitable perches.

Aquila verreauxi—Verreaux's Eagle:
Craggy hills of northern Upangwa *10*.

Aquila rapax—Tawny Eagle:
Doubtfully, *10*, *14*.

Polemaëtus occipitalis—Martial Eagle:
8,000 feet above Tandala in Ukinga, *24*.

Lophaëtus occipitalis—Long-crested Hawk-Eagle:
Not uncommon in the highlands, *10*, *14*, *24*.

Kaupifalco monogrammicus—Lizard Buzzard:
In plantations of exotics at Njombe, VI and IX, *10*.

Circaëtus pectoralis—Black-chested Harrier Eagle:
A common bird over the high grasslands, *10*, *14*, *24*.

Terathopius ecaudatus—Bateleur:
Not infrequent but mainly over northern bush country, *10*, *14*, *24*.

Cuncuma vocifer—Fish Eagle:

Common along the shores of Lake Nyasa *24*, nesting in baobabs, adults with brown immatures at nest VIII. Reported to be eaten by the Wakisi and the numbers reduced in recent years as a result, *10*.

Gypohierax angolensis—Palm-nut Vulture:
Manda, *24*, probably a casual visitor from the Nyasaland shore.

Buteo vulpinus—Steppe Buzzard (Ruewe):
Madehani, Ukinga, *8*.

Buteo rufofuscus—Jackal Buzzard:
Both black and white forms common in the higher country, *10*, *14*, *24*.

Accipiter badius—Shikra:
Possibly, round clumps on downs, *14*.

Micronisus gabar—Gabar Goshawk:
Bush country below 5,000 feet, *14*, *24*.

Circus macrourus—Pallid Harrier:
Common winter visitor to the grasslands. Records chiefly X and XI on arrival, *10*, *14*, *24*.

Circus aeruginosus—Marsh Harrier:
Over the Lihogosa and other swamps, *10*, *14*, *24*.

Francolinus spp.—Francolin:
Possibly *F. shelleyi* on Elton Plateau and *F. hildebrandti* in Upangwa mountain forests, *10*.

Francolinus levaillanti—Red-wing:
Edge of Ubena highlands where they abut on the brachystegia woodlands *14*.

Pternistis cranchii böhmi—Red-necked Spurfowl (Nerekere):
Breaking up into pairs mid-December *14*. Common throughout the highlands, *10*, *24*. In western Ukinga the race is apparently *intercedens*, *8*.

Coturnix coturnix—Quail:
Elton Plateau ? *10*.

Coturnix delegorguei—Harlequin Quail:
Fairly commonly flushed in Bena grasslands, *10*, *14*, *24*.

Excalfactoria adansoni—Blue Quail:
Scarce *14*.

Numida mitrata—Helmeted Guineafowl:
Mostly brachystegia country northern Ubena but not very plentiful. Pairs II and IV. *10*, *24*.

Gallinula chloropus—African Moorhen:
Makambako Dam *10*.

Fulica spp.—Coots:
Numbers on the open water of Lihogosa Swamp *14* also Manda on Lake Nyasa *24*.

Balearica regulorum—Crowned Crane:
In twos fairly common in the vicinity of swamps, etc., on the high grasslands, *10*, *14*, *24*.

Bugeranus carunculatus—Wattled Crane:
Much as the foregoing, *10*, *24*.

Neotis denhami—Jackson's Bustard:
Ubena downs, *14*, *24*, rather scarce now *10*.

Lissotis melanogaster—Black-bellied Bustard:
Over most of central and north-eastern Ubena, downs and brachystegia, *10*, *14*, *24*. Not common.

Burhinus capensis—Spotted Thickknee:
Open woodlands at medium altitudes, *8*, *10*, *24*.

Actophilornis africanus—Jacana:

Microparra capensis—Smaller Jacana:
Lynes records these as plentiful on the Lihogosa Swamp *14* but since then attempts have been made to drain it and they appear not to occur there now *24*. Jacana seen mouth of Mchuchuma river on Lake Nyasa *10*.

Charadrius tricollaris—Three-banded Plover:
At the muddy edges of dams and streams northern Ubena *10*.

Charadrius asiaticus—Caspian Plover:
Party Njombe aerodrome I, *24*.

Stephanibyx coronatus—Crowned Lapwing:
Short grass open patches brachystegia country IX, *10*.

Stephanibyx melanopterus—Black-winged Plover:
As above X, *10*.

Afribyx senegallus—Wattled Plover:
Party edge of Wanging'ombe Dam III, *10*.

Calidris minuta—Little Stint:
Lihogosa Swamp, *14*.

Tringa hypoleucos—Common Sandpiper:
Ruhuji and other streams of the downs, *14*, *24*, also Lake Nyasa VIII, *10*.

Tringa glareola—Wood Sandpiper:
Single birds feeding edge of Lake Nyasa 15.IX,*10* also Lihogosa swamp *14*.

Tringa stagnatilis—Marsh Sandpiper:
Muddy stream northern Ubena 26.X *10*.

Cursorius temminckii—Temminck's Courser:
Fairly common on the Bena grasslands especially where very short or recently burned, *10*, *14*, *24*.

Turnix sylvatica—Button Quail:
Bena grasslands *14*, *24*.

Colomba arquatrix—Olive Pigeon:
Breeding in Ubena forests I, *14*. Also in Ukinga forests *24*. Occasionally to Njombe in fig season *10*.

Streptopelia lugens—Pink-breasted Dove:
Not uncommon in high country (6,500 feet and over) where forest in the vicinity and coming on to the downs to feed. *10*, *14*, *24*.

Streptopelia semitorquata—Red-eyed Dove (Nuta):
Complete post-nuptial moult XII, *14*.

Streptopelia capicola—Ring-necked Dove:
Commencing post-nuptial moult XII, *14*.

Stigmatopelia senegalensis—Laughing Dove:
Mainly 4,000 to 5,000 feet though rarely above this. *10*, *14*, *24*.

Oena capensis—Long-tailed Dove:
Northern brachystegia area. Frequently found round cattle kraals, *10*, *24*.

Tympanistria tympanistria—Tambourine Dove:
Milo forests 7,000 feet *10*.

Turtur afer—Blue-spotted Wood-Dove:
Common all highland areas where there is some cover *10*, *24* Complete post-nuptial moult XII, *14*.

Turtur chalcospilos—Green-spotted Wood-Dove:
Generally lower woodland country, *10*, *24*.

Aplopelia larvata—Lemon Dove:
Scarce highland forest bird, about to breed XII, *14*.

Treron delalandii—Delalande's Green Pigeon:
Occasional flocks throughout *10*, *24*. Breeding Njombe XII,*14*.

Cuculus canorus—Cuckoo:
Imalinyi II, *24*.

Cuculus solitarius—Red-chested Cuckoo:
Common seasonally often near forest *24*, mostly calling XI *10*. About to breed Njombe XII, *14*.

Clamator jacobinus—Black and White Cuckoo:
Noted XI, XII, *14*, II, *24*.

Chrysococcyx cupreus—Emerald Cuckoo:
Once at Njombe *10*.

Chrysococcyx caprius—Didric Cuckoo:
Common *14*.

Chrysococcyx klaas—Klaas's Cuckoo:
Widespread throughout the year *24*.XI not yet breeding *14*.

Centropus superciliosus—White-browed Coucal:
C. s. loandae, compared with type, in hollows of Bena downs; complete post nuptial moult XII, *14*. Throughout the district wherever long rank grass in valleys. *10*, *24*.

Tauraco livingstonii—Livingstone's Lourie (Nyamakara):
Common in all higher forested areas of the district and sometimes to Njombe *10*, *24*. *T. l. livingstonii* in Ukinga forests *8* and apparently breeding in Uwemba forests towards the end of the dry season *14*.

Gallirex porphyreolophus—Violet-crested Lourie:
Low altitude woodlands in the south *24*, also once Ukinga forest edge at 7,000 feet *10*.

Gymnoschizorhis personata—Bare-faced Go-away Bird:
Common in northern brachystegia areas *10*, *24*.

Poicephalus cryptoxanthus—Brown-headed Parrot:
Not uncommon in the woodlands of the lower Ruhuhu valley *10*, *24*.

Agapornis personata—Yellow-collared Lovebird:
Just within our limits at the Ruaha bridge at the head of the Usangu flats *24*.

A flock of seven were in an old tobacco barn at Chimala just outside the district boundary, eating small grass seeds on the ground, *10*.

Coracias caudata—Lilac-breasted Roller:
Common woodlands below 4,500 feet *10*, *24*.

Ceryle rudis—Pied Kingfisher:
Very common along shores of Lake Nyasa *10* also occasionally rivers in northern Ubena *24*.

Megaceryle maxima—Giant Kingfisher:
Occasionally along wooded parts of the Ruhuji river in the highlands *14*, *24* where its diet is mainly crabs *10*. Also commonly flying along the shores of Lake Nyasa *10*, *24*.

Corythornis cristata—Malachite Kingfisher:
Occasionally beside the Ruhuji river *10*, *24*. Complete new dress XII, *14*.

Halcyon leucocephala—Grey-headed Kingfisher:
The odd bird passes through Njombe, *10*, *24*.

Halcyon chelicuti—Striped Kingfisher:
Dry country near Lake Nyasa *24*.

Merops apiaster—Bee-eater:
Parties IX—IV make much use of the telephone line from Iringa to Mbeya *10*, *24*.

Merops superciliosus—Madagascar Bee-eater:
Northern Brachystegia X, *24*.

Aerops böhmi—Böhm's Bee-eater:
Makonde on Lake Nyasa *24*.

Melittophagus pusillus—Little Bee-eater:
Common at lower altitudes, occasionally visiting the Bena grasslands *10*, *24*.

Melittophagus bullockoides—White-fronted Bee-eater:
Locally common throughout the district. In the highlands mainly along rivers *24*. About 30 holes in sandy bank of the Ruhuji constantly being visited XI, birds catching dragonflies and Swallowtail butterflies. Also perched on tiled roof and did much execution among wild bees emerging *10*. Juvenile nestlings Njombe XI and XII, *14*.

Bycanistes bucinator—Trumpeter Hornbill:
Low altitude woodlands Ruhuhu valley and along lake *10*, *24*.

Bycanistes brevis—Silvery-cheeked Hornbill (Minongo):
Forest areas of Ukinga mountains *8*, *10*, *24*, apparently absent from Ubena and Upangwa.

Tockus nasutus—Grey Hornbill:
Very common dry woodlands at back of Lake Nyasa, also northern miombo, *10*, *24*.

Tockus erythrorhynchus—Red-billed Hornbill:
Common in dry bush at extreme north of district *10*.

Tockus alboterminatus—Crowned Hornbill (Kasweswe):
Common where larger trees at river mouths on Lake Nyasa, *10*, *24*, also in Ukinga mountains *8* where consuming large grasshoppers *10*.

Bucorvus leadbeateri—Ground Hornbill:
Chiefly northern brachystegia in threes and fours, *10*, *24*.

Upupa africana—South African Hoopoe:
Fairly often all areas, mostly VII—IX, and singles, *10*, *14*, *24*.

Phoeniculus purpureus—Kakelaar:
Northern acacia country *10*.

Rhinopomastus cyanomelas—Scimitar-bill:
As last *10*.

Tyto alba—Barn Owl:
Once dead on the road in Upangwa woodlands, *10*.

Tyto capensis—Cape Grass-Owl:
Fairly common in highland grassland *14*, *24*.

Bubo africanus—Spotted Eagle-Owl:
Not often seen. One frequented road on rocky hillside near Njombe for some weeks in February *10*, *24*.

Caprimulgus guttifer—Usambara Nightjar:
Not infrequent along roads through Uwemba highland scrub and forest, *10*, *14*. Complete post-nuptial moult XII, *14*.

Caprimulgus pectoralis fraenatus—Dusky Nightjar:
Grove on the downs XII, worn dress after breeding *14*.

Caprimulgus tristigma lentiginosus—Freckled Nightjar:
Kopje on side of Ruhuji valley, full clutch XI, *14*.

Colius striatus—Speckled Mousebird:
C. s. affinis breeding Njombe XI, XII, I, *14*. Very common *24* and most destructive of green vegetables towards the end of the dry season, *10*.

Colius macrourus—Blue-naped Mousebird:
Dry northern area *24*.

Heterotrogon v. vittatum—Bar-tailed Trogon (Mbuyakitsi):
Mountain forests of Ukinga *8*, *10*, *24*.

Lybius torquatus—Black-collared Barbet:
L. t. congicus (=*torquatus*) breeding Njombe highland valleys XI, XII, *14*. Occasional visitor *24*. Not seen *10*.

Viridibucco leucomystax—Moustached Green Tinker-Bird. (Giviriri):
Common and noisy in the forests and forest jungles of the Ubena highlands. Complete post-nuptial moult XII, *14*. Also in Ukinga forests *8*. In Njombe garden IV and IX much calling "POP pop pop POP", and eating mistletoe berries *10*.

Pogoniulus bilineatus—Golden-rumped Tinker-Bird:
Mountain forests Ubena *10*.

Trachyphonus darnaudii—D'Arnaud's Barbet:
Party of three in and out of bushes dry northern area *10*.

Indicator minor—Lesser Honey-Guide:
Occasionally appear in Njombe for short periods playing around in the trees *10*.

Campethera cailliautii fülleborni—Little Spotted Woodpecker:
Praed and Grant (*22*) 1:758 give the type locality as Tukuyu but the reference they quote (*13*), published in 1900, reads "bei Langenberg am Nyassa See". It seems probable therefore that the place later known as Alt Langenberg (now

Lumbila in the Njombe District) on the lake shore is meant rather than Tukuyu (i.e. Neu Langenberg) some five thousand feet up and several miles from the lake. Alt Langenberg was not abandoned until 1900 and "Langenberg" without a qualification usually refers to the old station at the foot of the track up to Tandala in Ukinga where much of Fülleborn's collecting was done.

Dendropicos fuscescens hartlaubii—Cardinal Woodpecker:
Fairly common wherever tree growth, *8*, *10*, *14*, *24*.

Mesopicos griseocephalus—Olive Woodpecker:
Not uncommon highland forests Ubena and Ukinga, *8*, *10*, *24*. Complete post-nuptial moult XII, I, full new dress II and six-week juvenile with parent XII, *14*.

Apus apus—Common Swift:
Njombe XII, *14*, *24*.

Apus barbatus—Black Swift:
Njombe XII, I, about to breed in complete new dress *14*. Lynes gives *A. a. shelleyi* but I have examined his two birds in the British Museum and they seem referable to *A. barbatus* rather than to *A. niansae* or to any race of *A. apus*. See also Lack's recent article on the genus *12*.

Apus aequatorialis—Mottled Swift:
Small parties Ubena XII, *14*, and Ukinga XI, *10*, *24*.

Apus horus—Horus Swift:
Ubena I, *14*.

Mirafra africana—Rufous-naped Lark:
M.a.tropicalis breeding Njombe downs XII, compared with *nigrescens* from which it differs, *14*.
M.a.nigrescens type locality Elton Plateau *15*. Both fairly common on high open grasslands, *10*, *24*.

Mirafra rufocinnamomea—Flappet Lark:
Northern brachystegia areas and stops as soon as the open downs are reached, *14*, *24*.

Calandrella cinerea saturiator—Red-capped Lark:
23.XII flocks of up to fifty appeared on new arable and were gone next day *14*. Also Njombe aerodrome *24*.

Motacilla aguimp—African Pied Wagtail:
Common nearly everywhere particularly near habitations, *14*, *24*. Immature birds mostly IX, X, *10*.

Motacilla clara torrentium—Mountain Wagtail:
Pairs common on rocky mountain streams *8*, *10*, *14*, *24*.

Budytes spp.—Yellow Wagtails:
Common winter visitors throughout IX—III, *10*, *24*. Including *campestris*, *thunbergi*, and *rayi*, *14*.

Anthus similis nyassae—Long-billed Pipit:
Scarce Njombe downs *14*.

Anthus novaeseelandiae lacuum—Richard's Pipit:
Breeding XI. Cock birds in aerial song no later than end of XI, *14*. Common *10*, *24*.

Anthus trivialis—Tree Pipit (Kihorawulime, generic):
Common winter visitor outskirts of highland forests Ubena *14*, *24*, also in Ukinga *8*.

Anthus brachyurus leggei—Short-tailed Pipit:
Breeding in rains in highland grasslands where rather common, *14*.

Macronyx croceus—Yellow-throated Long-Claw:
Breeding XI, XII, common in high grasslands *14*. Also occurs in short grass areas of Ruhuhu valley, *10*, *24*.

Macronyx ameliae wintoni—Rosy-breasted Long-Claw:
About to breed near Lihogosa Swamp XII, *14*. Not seen by *10*, *24*, but easily overlooked if not facing one.

Turdoides jardinei—Arrow-marked Babbler:
Parties in bush and old cultivations lower levels, *10*, *24*.

Pseudoalcippe abyssinicus stierlingi—Abyssinian Hill-Babbler:
Common in Uwemba forests where they are more often heard than seen and breeding there XII, *14*. Also noted Ukinga *24*.

Pycnonotus xanthopygos—Black-capped Bulbul:
Very common throughout where some cover *10*, *24*. Lynes gives *P. tricolor fayi* clutch of two eggs Njombe XI, *14*, but recent re-examination refers his bird to *P.x.micrus*.

Phyllastrephus fischeri placidus—Fischer's Greenbul:
Common in highland forests, complete post-nuptial moult XII, I, II, *14*.

Arizelocichla nigriceps chlorigula—Mountain Greenbul (Luwiko):
Very common in highland forests of all highland areas and forest jungle where there is a good deal of undergrowth. Frequently calling, *8*, *10*, *14*, *24*.

Arizelocichla masukuensis—Shelley's Greenbul (Luwiko):
A.m.masukuensis from western Ukinga *8*. Also Uwemba forests, possibly *A.m.roehli*, *14*, *24*.

Muscicapa striata—Spotted Flycatcher:
Common winter visitor, *10*, *14*, *24*.

Alseonax adustus fülleborni—Dusky Flycatcher:
Common throughout the highlands wherever there is sufficient tree growth, *10*, *24*. Type locality of the race Lupila near Ukwama in Ukinga, *17*. Clutch of two eggs Njombe XI, *14* and juveniles II, Ukinga, *8*.

Alseonax aquaticus—Swamp Flycatcher:
At Lumbila (Alt Langenberg) on Lake Nyasa *5*.

Bradornis pallidus—Pallid Flycatcher:
Medium altitude woodlands *10*.

Dioptrornis fischeri nyikensis—Slaty Flycatcher:
Full clutch of two eggs Njombe XII, *14*. Young speckled birds XII and IV eating hairy caterpillars from the flower beds *10*. Common all highland areas with trees, *24*.

Melaenornis pammelaina—Black Flycatcher:
Medium altitude woodland, *10*.

Chloropeta natalensis—Yellow Flycatcher (Sokosela):
Common in highlands where scrub, bracken or low dense growth *10*, *24*. *C.n.massaica* in Ukinga *8* and about to breed Njombe XII, *14*.

Batis capensis—Puff-back Flycatcher (Kimbasasa):
Highland forest areas *8*, *10*, *24*. *B.c.mixta* recent breeding Ubena XII, *14*.

Batis molitor—Chin-spot Flycatcher:
Mostly woodland of moderate altitude *10*, *24* but also riparian tree-growth in highlands. *C.m.puella* (=*molitor*) recent breeding Njombe XII, *14*.

Platysteira peltata—Wattle-eyed Flycatcher:
Mainly wooded shore of Lake Nyasa (*10*) but occasionally to riparian tree growth in highlands, *24*.

Trochocercus a. albonotatus—White-tailed Crested Flycatcher:
Not uncommon in highland forests and forest jungle, also Njombe, *10*, *24*, End of breeding XII, *14*.

Tchitrea suahelica—Red-winged Paradise Flycatcher:
Fairly widespread in the highlands where trees but not numerous *10*, *24*. Ubena full clutch of two eggs XI, *14*. Possibly *T. viridis* occurs in the north west.

Tchitrea plumbeiceps violocea. Grey-headed Paradise Flycatcher:
Female in Lynes' collection from Njombe, *10*.

Turdus libonyanus—Kurrichaine Thrush:
Not infrequently in the plantations at Njombe, *10*, *24*.

Turdus gurneyi—Gurney's Thrush (Kimukimu):
In the depths of the forest and difficult to see. Recent breeding I. Lynes gives *T.g.usambarae* (=raineyi) for Ubena his birds agreeing with seven from the Usambaras and not with *T.g.otomitra*, *14*. Reichenow and Loveridge (*19*, *8*,) give *T.g.otomitra* (=*gurneyi*) for western Ukinga (the type locality for *otomitra* being Bulongwa) though this does not accord with the distribution in Praed and Grant 2. 248. See however a recent discussion on the races of this bird *6*.

Psophocichla litsitsirupa—Groundscraper Thrush:
A single bird at the edge of the brachystegia IX:54 and another single frequenting the lawn and the trees on the boulder-strewn hillside above the falls at Njombe VIII, IX,X:55. Not seen at other times and probably migrant from the Iringa uplands during the dry season. Its habit of running across the lawn with its body held horizontally and then suddenly standing as upright as possible to look about, together with its clownish face, make it an entertaining addition *10*.

Monticola saxatilis—Rock Thrush:
Singles in the thorn bush about Wanging'ombe XII, II, *10*.

Oenanthe oenanthe—Wheatear:
As last XII, on open gravelly ground, 10. In smaller numbers to the highlands *14*.

Oenanthe pileata—Capped Wheatear:
Rare in the highlands, completing post-nuptial moult XI, *14*.

Thamnolaea cinnamomeiventris—Cliff Chat:
Common along rocky stretches behind the shore of Lake Nyasa, particularly Manda Mission where they were in and out of the grass-thatched church *10*, *24*. Reichenow's *Th. argentata 16* is probably a juvenile of this species.

Saxicola torquata—Stonechat (Kambasaa):
Common all open highland areas where there are a few bushes *24* and including the Elton Plateau *10*. *S.t. promiscua* Ukinga *8* and in Ubena full clutches of three and four eggs XI, XII, *14*.

Saxicola rubreta—Whinchat:
Scarce winter visitor *14*.

Cossypha heuglini—White-browed Robin-Chat:
Very common and noisy at garden in Njombe and elsewhere in the highlands where there is sufficient cover *10*, *24*. Apparently nesting in honeysuckle hedges X and I and immatures much in evidence XII, I and IV, *10*. *C. h. subrufescens* clutches of two eggs XII, *14*.

Cossypha caffra—Robin-chat (Ndorora):
Throughout in higher areas where thick cover available but less common than the last *8*, *10*, *24*. *C.c. iolaema* breeding earlier than the last *14*.

Bessonornis anomala—White-throated Robin-Chat:
Breeding Uwemba forests XII, a skulker with a harsh grating alarm note *14*.

Modulatrix stictigula pressa—Spot-throat:
Found in Ukinga in the under-brush of big forest hopping about feeding among the dead leaves of the forest floor, *8*, *24*.

Alethe fülleborni fülleborni—White-chested Alethe (Mesa):
Type locality near Tandala in Ukinga *16*. Hopping about forest floor where dense tangled undergrowth *8*. Also shot by Amani collector in Upangwa highland forests *24*.

Alethe lowei—Lowe's Alethe:
Only known from a single specimen collected eight miles south of Njombe inside forest jungle *2*. Near breeding XII, *14*. Appears in Lynes as *Sheppardia cyornithopsis*.

Erythropygia zambesiana—Red-backed Scrub-Robin:
Favours dry scrub in the lower parts of the district *24*.

Pogonocichla stellata—Starred Bush-Robin (Ndolola):
Common, often very common, in highland forests and occasionally to Njombe itself *10*, *16*, *24*. Breeding Ubena XII, *14*. Fledglings Ukinga mid-II *8*. The white star is not generally visible in the field even at close quarters.

Sylvia c. communis—Whitethroat:
Not uncommon winter visitor frequenting bushes in the hollows of the downs *14*.

Sylvia borin—Garden Warbler:
Quite common winter visitor frequenting the outer foliage of evergreen trees in the forest *14*.

Sylvia a. atricapilla—Blackcap:
Less frequent than the last but same environment *14* and also Njombe gardens *10*.

Acrocephalus arundinaceus—Great Reed-Warbler:
Fairly common winter visitor *14*.

Acrocephalus schoenobaenus—Sedge-Warbler:
Common winter visitor, *14*, *24*.

Sathrocercus cinnamomeus nyassae.—Cinnamon Bracken-Warbler:
In bush jungle which replaces recently destroyed forest. Very skulking but can be attracted to within short range by sucking noises *14*. Fairly common Ukinga and Ubena *24*.

Sathrocercus mariae usambarae—Evergreen-forest Warbler:
In beds of nettles and tangled undergrowth in the rain forests of Ukinga. A constant twittering but remains well concealed *8*.

Phylloscopus trochilus acredula—Willow Warbler:
Winter visitor—not common *14*.

Schoenicola brevirostris—Fan-tailed Warbler:
Common in the highlands in moist valley bottoms *24*. About to breed Ubena XI, *14*.

Apalis murina—Bar-throated Apalis (Kaluambo):
Fairly common all highland forest areas *8*, *10*, *24*. Breeding Njombe XII, I, *14*.

Apalis cinerea alticola—Brown-headed Apalis (Kaukuswa):
Common, mostly in riparian tree-growth and round Njombe chasing about in the trees with loud and varied calls, *8*, *10*, *24*. Breeding I and II, *14*.

A.a. brunneiceps from Lupila near Ukwama in Ukinga (*3*, *17*) is now treated as synonymous with *A.c. alticola 7*, *21*.

Apalis caniceps—Green-tailed Apalis:
Low and moderate altitude woodlands in north and south, *10*, *24*.

Apalis bamendae—Bamenda Apalis:
Not uncommon working over the outer branches of evergreen highland forests Ubena and Upangwa *10*. *A.b.strausae*, partly white-chinned, partly rufous chinned, breeding XII and I, *14*.

Sylvietta whytii—Red-faced Crombec:
S.w.jacksoni scarce in riparian growth in highlands and breeding XI, XII, *14*. More commonly in moderate and low altitude bush *10*, *24*.

Eremomela icteropygialis—Yellow-bellied Eremomela:
Brachystegia woodlands *10*.

Cisticola ayresi—Wing-snapping Cisticola:
Breeding I, II. Common all over the dry short grass stretches of the downs *14*.

Cisticola brunnescens cinnamomea—Pectoral-patch Cisticola:
Breeding XII. Common locally on moist or wet ground in the highlands *14*.

Cisticola lais semifasciata—Wailing Cisticola:
Breeding XI, XII. Fairly common in the highlands in the vicinity of rocky outcrops and associated grass and small bushes. Absent from the uplands *14*.

Cisticola n.njombe—Churring Cisticola:
Type locality 6,500 feet near Njombe *1*. Breeding XII, I, II. Abundant in hollows of the downs, *14*. Possibly *C.n.mariae* on the Elton Plateau.

Cisticola nigriloris—Black-lored Cisticola (Ndidi):
Abundant in hollows and valleys of the highlands *8*, *10*, *24*. Breeding XII, I, II. Noisy piping duet to quintet style of courtship *14*.

Cisticola cantans—Singing Cisticola:
Breeding XII, I, II. Fairly common in the hollows *14*.

Cisticola natalensis—Croaking Cisticola:
Breeding XII, I, II. Fairly common but rather local *14.*

Melocichla mentalis orientalis—Moustache Warbler:
Breeding Njombe XI, XII. Abundant in hollows on the downs *14.*

Hirundo r. rustica—Swallow (Kilwewe, generic):
Common winter visitor, *8*, *24.* Apparently stationary XI to I, *14.* Earliest 25.IX, latest 1.IV, most in evidence on northward migration in March *10.*

Hirundo a. angolensis—Angola Swallow:
Breeding XI—I and nesting under wooden beams of Ruhuji bridge *14.* Fairly common *10*, *24.*

Hirundo atrocaerulea—Blue Swallow:
Breeding XI, XII in sheds and artificial pits *14* also under overhanging banks *8.* Only noticed IX—II and apparently absent at other seasons *10*, *24.* *H.a.lynesi* has been described from Njombe *4* but its validity seems doubtful *9.*

Hirundo smithii—Wire-tailed Swallow:
Common below about 4,500 feet, *10*, *24.*

Hirundo daurica emini—Red-rumped Swallow:
Breeding XI, XII. Common *14.*

Hirundo senegalensis—Mosque Swallow:
Scarce migrant—*14*, *24.*

Hirundo cucullata—Larger Stripe-breasted Swallow:
Pair seen at Lumbila on Lake Nyasa *20.*

Hirundo abyssinica—Striped Swallow:
Lower Ruhuhu valley on Songea border *24.*

Hirundo griseopyga—Grey-rumped Swallow:
Northward bound XII.I, *14.* Commonly migrant *24* but seen most months except during rains *10.*

Riparia paludicola—African Sand-Martin:
Scarce migrant *14.* Possibly some *R.p. ducis 10.*

Riparia cincta suahelica—Banded Martin:
Near breeding Njombe XI, XII, *14.* Skimming highland streams in open country *10*, *24.*

Ptyonoprogne fuligula—African Rock-Martin:
Pair at nest Lupingu Mission, Lake Nyasa, VIII, also seen at rocks overhanging waterfall Uwanji 7,000 feet *10.*

Delichon urbica—House Martin:
Ukinga X, *24.*

Psalidoprocne o. orientalis—Eastern Roughwing:
Breeding Njombe XII *14.* Common all highland areas often near forests or along valleys *10*, *24.*

Psalidoprocne albiceps—White-headed Roughwing:
Throughout the highland areas and often associated with the last, but not nearly so common, probably only a dry season visitor from the wooded uplands, *10*, *24.*

Campephaga sulphurata—Black-Cuckoo-Shrike:
Breeding XII riparian tree areas *14*. More generally in lower altitude woodlands *24*.

Coracina pectoralis—White-breasted Cuckoo-Shrike:
Medium to low altitude woodlands in Upangwa *10, 24.*

Coracina caesia pura—Grey Cuckoo-Shrike (Dakudaku, generic):
Western Ukinga *8*.

Dicrurus adsimilis—Drongo:
Common in woodlands below 5,500 feet *10, 24.*

Dicrurus l. ludwigii—Square-tailed Drongo:
Ukinga Forests *8*.

Prionops plumatus—Grey Helmet-Shrike:
Lower Upangwa woodlands and Chimala scarp *10, 24.*

Sigmodus retzii—Red-billed Helmet-Shrike:
Upangwa woodlands *24*.

Eurocephalus anguimitens—White-crowned Shrike:
Very common in dry bush along Great North Road *10, 24.*

Lanius collaris—Fiscal:

Lanius marwitzi—Uhehe Fiscal:

The Hehe Fiscal has a possibly discontinuous distribution from Mpwapwa through the uplands of the Iringa district to the highlands of Njombe and occurs in both brachystegia woodland and in the open mountain grasslands provided there are scattered trees or clumps of bushes, *14*. Although both species have been seen within a mile or two of each other near Mdandu in Ubena and Lugarawa in Upangwa *24* in general they seem to exclude each other. In Uwanji at about 7,000 feet in the north-west *L. collaris* occurs (as it does on the adjacent Porotos and near Tukuyu—country little different from much of the Njombe highlands) and along the Chimala Scarp—whence no doubt the Mdandu birds. In the south *L. collaris* re-appears in the woodlands of Upangwa below about 5,000 feet. All the central mountain grasslands of Ukinga, Ubena and Upangwa are exclusively *L. marwitzi* country. The difference in range is not a simple one of altitude or habitat. The answer possibly is that both have arrived in the district comparatively recently from different directions and the problem is one of gradient rather than pure altitude. Coming in from the north-east the ascent to the high grasslands as far west as Magoye overlooking the Rungwe district is gradual for *marwitzi* as it is for *collaris* from the west up the Porotos or from the south-east into Upangwa. In the north-west the Nyasan Rift and its forests and the high treeless Elton Plateau and Kipengeres, and in the south the escarpments, may have hindered the free movement of a bird not much given to high or extensive flights *10*.

Lanius collurio—Red-backed Shrike:
Winter visitor *24*. Most noticeable during the northward migration in April when they are common at all altitudes *10*.

Urolestes melanoleucos—Magpie Shrike:
Quite common singly or in small family parties in the dry bush along the Great North Road *10, 24.*

Laniarius funebris—Slate-coloured Boubou (Dakudaku):
Northern brachystegia woodlands and especially along rivers where its typical Boubou-like calls draw attention to it, *10*, *24*. Also mentioned from the western highlands of Ukinga *8* but the next species seems more likely.

Laniarius fülleborni—Fülleborn's Black Boubou:
Breeding in Uwemba highland forests XII, I, II. A loud deep flute-like Whoo-hoo-hoo immediately followed by Whooee in slightly different key *14*. Also Ukinga *24*. Very difficult to get a glimpse of *10*.

Laniarius aethiopicus major.—Tropical Boubou:
Breeding XI, II, *14*. Common, particularly in the highlands, wherever there is thick cover. Quite a variety of calls from the birds of the Njombe gardens alone, *10*, *24*.

Dryoscopus cubla—Puffback Shrike:
Fairly widespread in highland areas where some trees VIII—X, and seems to be a dry season wanderer from the wooded uplands *10*, *24*.

Tchagra senegala—Black-headed Bush-Shrike:
T.s.mozambica (=*senegala*) breeding Njombe XI, *14*. Fairly common and widespread throughout the district *10*, *24*.

Tchagra australis—Brown-headed Bush-Shrike:
More confined to bushes in the lower woodlands *8*, *24*.

Bocagia m.minuta—Blackcap Bush-Shrike:
Breeding Njombe XI, *14*. Rank riparian grass and bushes throughout *10*, *24*.

Chlorophoneus sulfureopectus—Orange-breasted Bush-Shrike:
Below 5,000 feet Upangwa woodlands *24*.

Chlorophoneus nigrifrons—Black-fronted Bush-Shrike:
Highland forests Ubena and Upangwa *10*, *14*. Hopping about in epiphytic growths thirty to sixty feet up in heavy forest *8*.

Malaconotus blanchoti—Grey-headed Bush-Shrike:
Below 5,000 feet Upangwa woodlands *24*.

Parus leucomelas insignis—Black Tit:
Recent breeding XI, XII, *14*. Fairly common in highland areas where trees *10*, *24*.

Parus rufiventris—Cinnamon-breasted Tit:
Upangwa woodlands *10*, *24*.

Oriolus o. oriolus—Golden Oriole:
Winter visitor *10*, *14*. X and III, *24*.

Oriolus auratus—African Golden Oriole:
Highland forest *14* and dispersedly throughout district, *10*, *24*.

Oriolus larvatus—Black-headed Oriole:
5,000 feet and below, mainly brachystegia country, not common *10*, *24*.

Corvus albus—Pied Crow (Lihobe):
Very common throughout the district *8*, *14*, *24*. Nest building in Eucalyptus IX, *10*.

Corvultur albicollis—White-necked Raven:
Common all altitudes but less so than the previous species. *8*, *10*, *14*, *24*.

Creatophora cinerea—Wattled Starling:
Small parties in light dry bush Mtwango and northwards IX and X, rather restless, *10*.

Cinnyricinclus leucogaster—Violet-backed Starling:
Occasionally in highlands IX, X, not infrequently associating with Orioles. Also low altitude woodlands, *10*, *14*, *24*.

Lamprocolius chalybaeus sycobius—Blue-eared Glossy Starling:
Recent breeding Njombe XII, *14*. More frequent lower woodlands *10*, *24*.

Cosmopsarus unicolor—Ashy Starling:
Common dry northern thorn bush in parties, *10*, *24*.

Onychognathus walleri—Waller's Red-wing Starling (Mulea):
Western Ukinga mountain forests *8*, *10*, *16*, *24*.

Onychognathus morio—Red-wing Starling:
Plentiful at Kidagalla Mission northern woodlands and also Upangwa *10*, *24*. *O.m.shelleyi* in Ukinga *8*.

Onychognathus tenuirostris—Slender-billed Redwing Starling:
Breeding in cascades of Ruhuji Falls at Njombe XI, XII. Also young nearly fledged XI and eggs I, *14*. Juvenile with parent VIII, *10*. Also Hagafiro and Ijuniro Falls *24*. Frequently the whole party rises up, wheels about above the valley below the falls and then back to the same clump of bushes above the spray.

Spreo superbus—Superb Starling:
Common in the Wanging'ombe-Makambako area along the Great North Road, *24*. Eating grasshoppers which were sometimes filched from them by White-crowned Shrikes *10*.

Buphagus erythrorhynchus—Red-billed Oxpecker:
Dry northern bush on cattle *10*, *24*.

Zosterops senegalensis anderssoni—Yellow White-eye:
Breeding Uwemba forests XII, fairly common at edges of forest in uplands and highlands *14*, *24*.

Zosterops virens stierlingi—Green White-eye:
Recent breeding Uwemba forests XII, *14*. More of a highland and forest bird than the last and fairly plentiful in Ukinga *8*, *10*, *24*.

Nectarinia famosa—Malachite Sunbird (Kalusongwe):
Common throughout the mountain grasslands where there is occasional cover and also on the Elton Plateau when the flowers are in bloom. *8*, *10*, *14*, *24*.

Nectarinia johnstoni—Scarlet-tufted Malachite Sunbird:
Female seen in a little wooded valley about 6,700 feet on the lake face of the Livingstone Mts. about ten degrees south, above Makonde. Males must occur along the Livingstones but overlooked as the pectoral tufts are seldom visible in the field *10*.

Nectarinia kilimensis arturi—Bronzy Sunbird:
Often found feeding on *Loranthus* flowers *14*. Also Ukinga *8*. Frequently seen at Njombe *24*. Although on the look-out for it and much suitable habitat only seen twice in two and a half years, once in Ukinga and once at Njombe *10*.

Cinnyris cupreus—Coppery Sunbird:
Makambako *24.*

Cinnyris mariquensis—Mariqua Sunbird:
Dry bush country Makambako *10.*

Cinnyris talatala—White-bellied Sunbird:
In dry woodlands Ruhuhu valley *24.*

Cinnyris venustus—Buff-breasted Sunbird:
Very common in highlands *14, 24.* A male spent the best part of one June and July banging away at his reflection at every window in the house in turn. Occasional bursts of sweet, but rather amorphous song *10.*

Cinnyris mediocris fülleborni—Double-collared Sunbird:
Common in Uwemba forests *14* and in Ukinga *8.* Generally common throughout the highland areas in close proximity to forest, *10, 24.*

Chalcomitra amethystina—Amethyst Sunbird:
Doubtfully at edge of northern brachystegia *14,* also in moderate altitude brachystegia in Upangwa *24.*

Chalcomitra senegalensis—Scarlet-chested Sunbird:
Lower Ruhuhu valley to Lake shore, *10, 24.*

Passer spp.—Sparrow:
In 1931 Njombe village had a very small population of *P.suahelicus 14.* They are now firmly established and nesting *10.* Sparrows are more plentiful in the lower areas and probably include *P. griseus 10, 24.*

Ploceus nigriceps—Layard's Black-headed Weaver:
Colonies in large trees at river mouths L. Nyasa *10.*

Ploceus jacksoni—Golden-backed Weaver:
Northern bush country nesting on tall reeds in dam *10, 24.*

Symplectes bicolor—Dark-backed Weaver:
Musiora Forest in Upangwa highlands *10.*

Hyphanturgus ocularius—Spectacled Weaver:
At Njombe not yet breeding XII and not common *14.* Rarely to gardens where they work over the bark of old trees *10.* Also Lumbila on Lake Nyasa *24.*

Xanthophilus subaureus—Golden Weaver:
Manda area on Lake Nyasa *10, 24.*

Xanthophilus xanthops—Holub's Golden Weaver:
Breeding XI, XII in grass jungles of wider valleys in Ubena highlands *14.* Also Ukinga and Upangwa *24.*

Othyphantes stuhlmanni sharpii—Stuhlmann's Weaver:
Recent breeding Njombe XII, *14.* Also mountains of Ukinga *24.*

Xanthoploceus bertrandi—Bertram's Weaver:
About to breed XI, XII, in flat valley of the upper Ruhuji *14.* Also similar country Ukinga *24.*

Anaplectes melanotis—Red-headed Weaver:
Northern brachystegia *10* and shores of Lake Nyasa *24.*

Quelea erythrops—Red-headed Quelea:
Tall grass stream edges of Wanging'ombe area, fortunately not common *10, 24.*

Euplectes orix nigrifrons—Red Bishop-Bird:
Fairly common but local *14.* No red Bishops noted in highlands *10, 24.*

Euplectes hordacea—Black-winged Red Bishop:
Below 5,000 feet but not very common *10, 24.*

Euplectes capensis xanthomelas—Yellow Bishop:
Common all altitudes *10, 14, 24.*

Coliuspasser axillaris phoeniceus—Red-shouldered Whydah:
Not uncommon coarse valley-bottom growth all altitudes *10, 14, 24.*

Coliuspasser m. macrourus—Yellow-mantled Whydah:
Valleys in highland grasslands *10* and breeding later than the next species, *14.*

Coliuspasser hartlaubi psammocromius—Marsh Whydah (Nyerbeta):
Type locality of the race Tandala in Ukinga *15.* Common in the moister parts of the highland grasslands including the Elton Plateau *8, 24.* Commoner than the preceding species and into plumage by the end of October *10.* Breeding Ubena I, II, *14.*

Coliuspasser ardens—Cut-throat Whydah:
Common throughout in grasslands *8, 10, 14, 24.*

Spermestes cucullatus—Bronze Mannikin:
Not uncommon lower altitudes *10,* raiding wheatfields Ukinga highlands X, *24.*

Cryptospiza reichenovii—Red-faced Crimson-Wing (Kilutundulu):
Mountain forests Ubena *14* but more particularly Ukinga forests *8, 10, 24.*

Ortygospiza atricollis mülleri—Quail Finch:
Not common, found in moist grassy flats of highlands *14.*

Pytilia afra—Orange-winged Pytilia:
Upangwa woodlands *24.*

Lagonosticta rubricata haematocephala—African Fire-Finch:
Common *10, 14, 24.*

Lagonosticta senegala ruberrima—Red-billed Fire-Finch:
Common *10, 14, 24.*

Coccopygia melanotis kilimensis—Yellow-bellied Waxbill:
Common in highlands, frequently on the lawn or in grasses along the river in parties four to thirty strong, *10, 14, 24.*

Estrilda astrild—Common Waxbill:
As above and often in mixed parties *10, 14, 24.*

Estrilda subflava—Zebra Waxbill:
Not common *24.*

Estrilda paludicola marwitzi—Fawn-breasted Waxbill:
Commonly in flocks till II, *14,* and generally as preceding species, *10, 24.*

Uraeginthus angolensis—Cordon Bleu:
Woodland and cultivation below 5,000 feet *10, 24.*

Uraeginthus bengalus—Red-cheeked Cordon Bleu:
Much as above but confined to northern areas *10, 24.*

Granatina ianthinogaster—Purple Indigo-bird:
Not common in scrubby brachystegia Mdandu, etc., *10*, *24*.

Hypochera spp.—Indigo Birds:
Njombe III, IV, V, *10*. Also low altitudes Upangwa *24*. Probably two species.

Vidua macroura—Pin-tailed Whydah:
Common at least 6,500 feet and below *14*, *24*, in breeding plumage I—III, *10*.

Steganura paradisea—Paradise Whydah:
Breeding plumage IV, V, mainly woodlands 4,500 feet and below *10*, *24*.

Serinus mozambicus—Yellow-fronted Canary:
Low altitude woodland, Upangwa *10*, *24*.

Serinus sulphuratus—Brimstone Canary (Suluwiri):
S.s. shelleyi (*sharpii*) breeding mid-rains *14*. Common bird of high grasslands *8*, *24*. Frequently pulling *Compositae* to pieces in the garden *10*.

Serinus striolatus whytei—Streaky Seed-eater:
Quite common in mountain grasslands Ubena and Ukinga where there are patches of bushes, mostly in pairs IX, XII, *10*, *24*.

Serinus burtoni melanochrous—Thick-billed Seed-eater:
Type locality of the race Tandala in Ukinga *17*. Not common, several together moving slowly about in forest jungles. Month old juveniles XII, I, *14*.

Linurgus olivaceus kilimensis—Oriole-Finch:
In forest above Ukwama in Ukinga *23*.

Carduelis citrinelloides hypostictus—African Citril:
Breeding Njombe from II on. Not common in riparian tree growth in the highlands *14*.

Emberiza o. orientalis—Three-streaked Bunting:
Breeding hollow in the downs XI, *14*. Occasionally turns up in gardens at Njombe, often in pairs *24*. One feeding on cased larva which it squeezed through its mandibles like a toothpaste tube, *10*.

Emberiza flaviventris—Golden-breasted Bunting:
Woodlands of Upangwa below 5,000 feet *10*, *24*.

Fringillaria tahapisi—Cinnamon-breasted Rock-Bunting:
Not uncommon along shores of Lake Nyasa *10*, *24*.

REFERENCES

Bulletin British Ornithologists' Club:

1. 53, 1933:170 *2*. 61, 1941:61 *3*. 61, 1941:63
4. 62, 1942:45 *5*. 72, 1952:21 *6*. 75, 1955:70–
7. 76, 1956:31

Bulletin Museum Comparative Zoology, Harvard:

8. 75, 1933/34 *9*. 106, 1951:69-114
10. Haldane, L. A. (Personal observations).

"Ibis":

11. 1941:52-53 *12*. 1956:34-62

Journal für Ornithologie:

13. 1900:204 *14.* 1934:Sonderheft

Ornithologische Monatsberichte:

15. 1900:39 *16.* 1900:99 *17.* 1900:122

18. 1901:90 *19.* 1904:95

"Ostrich":

20. 1946:127 *21.* 1952:157

22. Praed and Grant. Birds of Eastern and North-eastern Africa (2 vols).

23. Stowell, R. F. (in litt.).

24. Wenban-Smith, W. (Njombe District Book and personal communications).

THE FRENCH AT KILWA, 1776-1784

By Sir John Gray

The principal source of my information for this article is a manuscript book which is now in the Rhodes House Library at Oxford and contains 202 pages. Through the courtesy of Bodley's Librarian at Oxford I have been supplied with a photostat copy. It has the merit of being written in a very legible hand. The main contributor thereto is a certain Monsieur Morice, regarding whom I know nothing beyond what he tells us about himself in this manuscript, except that on 9th May, 1784, Alexander Dalrymple, hydrographer of the British East India Company, produced a *Plan of Quiloa and its environs on the East Coast of Africa from the observations of Sieur Morice.*

Morice was a Frenchman and the owner of three or more "armateurs", a word literally meaning privateer, but in its context it evidently means a trader trading solely on his own account and without any backing or support either from the French government or any monopolist trading company. He evidently used Mauritius as the base for his operations. In 1774 he was trading to the Kerimba Islands to the south of Cape Delgado. In 1776 he himself proceeded as far north as Zanzibar. It would appear that others of his ships went further up the coast to Pate, but were apparently not well received. In 1777 the ruler of Pate wrote asking the governor of Mauritius to send more ships, but history is silent as to whether he ever did so. Morice himself went no further north than Zanzibar with the result that his information regarding the coast to the north of Zanzibar is not always accurate. For instance, he alleges that Pemba is a larger island than Mauritius. He is equally inaccurate when he says the island was at that date subject to the Imam of Muscat.

Whilst he was at Zanzibar, Morice learnt of the commercial potentialities of Kilwa and accordingly made his way there. During his visit he managed to persuade the Sultan of Kilwa to forbid a Dutch vessel from the Cape from trading there for slaves. Though he supplied no details, he himself managed to do good trade at Kilwa and evidently obtained some sort of promise, which may have been verbal, of further and better dealings in slaves in future years. Whatever may have been the bargain which he struck with the Sultan of Kilwa, it is clear that *prima facie* it had all the appearance of being a very good bargain for Morice, but he realized that he needed support from elsewhere if he was to hold the other party to its terms. Accordingly, on his return to Mauritius he tried to interest the French authorities in it. Unfortunately for himself, he arrived back in an interregnum between two governors. Charles Louis d'Arsac de Ternay, a capable but none too popular governor, was either on the verge of departure or else had already set sail for Europe. His successor Antoine de Guiran la Brillane either had not yet arrived, or else had only just arrived. He died in 1779. He had a poor opinion of the inhabitants of the island and was as much disliked as was his predecessor. If Morice approached either of these two officers, he would appear to have received little or no encouragement. At any rate he decided to apply to a Monsieur de Cossigny for assistance. This gentleman would appear to be identifiable with Cossigny de Palma, who was born in Mauritius in 1736 and was the son of a French officer who had first arrived in the island in 1732 as a military engineer. The son was responsible for the introduction of a number of useful

economic trees and crops into Mauritius. At his garden at Palma (begun in 1775) many vegetables were grown and many animals reared which had not been seen previously in the island. His name is still remembered in the island as one of its greatest benefactors(1). To judge from a letter which Morice subsequently wrote to him Cossigny was sympathetic but non-committal. He requested Morice on his next voyage to East Africa to draw up his written observations "in regard to every detail respecting the soil of the countries . . ., the customs of the people inhabiting it (and), their possible usefulness for our country". Morice accordingly did so. On 7th January, 1777, from some place on the coast of Africa, he addressed a long letter to Cossigny in which he urged the speedy setting up of a French establishment at Kilwa.

Cossigny, however, was still not to be easily convinced. He decided to wait until Morice himself should return to Mauritius. Morice arrived the e in about June, 1777. Cossigny them proceeded to deliver to Morice a series of *questionnaires*, which began on or before 24th June and ended on 4th July. His questions and the replies thereto appear in parallel columns in the Rhodes House manuscript. At one stage Morice turns the tables on Cossigny and proceeds to question him, but these questions only take up four of the two-hundred-odd folios. Cossigny's questions cover most of the aspects of Morice's project—political, strategic, commercial and financial, but many of them are not particularly relevant to the matters under discussion. Cossigny was evidently interested in the manners and customs of the African inhabitants. Whilst due allowance must be made for the facts that Morice had his own particular axe to grind and that his own personal knowledge was confined to the ports and islands to which he paid somewhat fleeting visits, his answers are interesting and, owing to the lack of other contemporaneous evidence, often valuable.

After these preparatory observations it is desirable to give as briefly as possible a brief summary of the political situation at Kilwa and in other parts of East Africa at the time when Morice began trading there. Kilwa was colonized by immigrants from Africa at a very early date. Morice says the "Moors" arrived with forty vessels 963 years previous to the date at which he was writing. Allowing for the fact that his informants were calculating according to the Muslim calendar, this would take us back to about 323 A.H., corresponding to 939 or 940 A.D. Mr. Freeman-Grenville informs me that, according to his computations which are based upon the Portuguese and Arabic versions of the Kilwa Chronicle and the writings of Ibn Battuta the date should be some year about 346 A.H. or 957 A.D. It is of course impossible to pinpoint the year with any accuracy, but it is interesting to note how closely the information given to Morice approximates to that in the Kilwa Chronicle.

All versions of the Kilwa Chronicle—Portuguese, Arabic and Swahili—agree that these early settlers hailed from Shiraz in Persia. A Swahili version says the leaders of these settlers was a certain Ali bin Suleimani El-Shirazi, who married the daughter of Mrimba, the local African chief, and eventually evicted his father-in-law from Kilwa Kisiwani. In course of time Muhammad, the son of this marriage, succeeded his father as Sultan of Kilwa. The Swahili version then proceeds as follows:—

"Then some Wa-Malindi came from Malindi. They went to Sultan Muhammad to greet him. Then the Sultan told the Wa-Malindi, 'Settle here at Kisiwani'. The Wa-Malindi replied, 'If we settle here, what shall we receive?'.

The Sultan told them, 'Settle here at my place. You will receive the post of governor (*Uamri*) and of judge (*Ukadi*)'. The Wa-Malindi agreed and settled at Kisiwani."(2).

Though the Swahili chronicle professes to give a genealogical table of the Sultans of Kilwa from the days of its first colonization by the Shirazi down to the middle of the nineteenth century, that table is far too short to be regarded as reliable. The chronicle is clearly no more than an episodical history with considerable *lacunae* between the different events which it records. It is therefore impossible to date with any precision the time of the arrival of these settlers from Malindi. There is none the less corroboration of the statement that they did come to Kilwa and assumed the dominant position which the Swahili chronicle ascribes to them.

What is certain is that the connection between Malindi and Kilwa goes back to a very early date in the history of the latter place. When Cabral visited Kilwa in 1500, a certain Moleiomar (? Ulema Omar), who was brother of the "King" of Malindi, was there and gave Cabral some useful information (3). The Arabic version of the Kilwa Chronicle tells us that, when Vasco da Gama reached Kilwa in 1502, it was after some deliberation decided that the Amir Ibrahim should go out in a boat to interview him, accompanied by Fakih Ayub and Fakih Omar (? Ulema Omar), "who were the sons of Fakih Muflih el Malindi". Barros tells us that, after the murder in 1506 of the Sultan of Kilwa nominated by the Portuguese, a dispute as to the succession led to internal dissensions and that consequently there was a considerable exodus of the inhabitants of Malindi, Mombasa and elsewhere who returned later when the Portuguese managed to adjust those disputes (4). Morice tells us that at the time of his visit the Wazir (Minister), who was a real power behind the throne, was a "Moorish Sheikh" called *Malindani*. As the Swahili version of the Kilwa Chronicle tells us, when in the first half of the nineteenth century Said bin Sultan obtained control of the island, he "established a custom of giving every year to the ruler (*Mfalme*) two doti of cloth and to the Wa-Malindi the same from one year to another"(5).

As the Arabic and Portuguese versions of the Kilwa Chronicle show, in the fifteenth century the Wazir and Amir played important parts in the making and unmaking of the Sultans of Kilwa. They even at times themselves assumed the sovereignty, but on each such occasion there was eventually a restoration to the throne of some member of the ancient royal family. From the information supplied by the Swahili version of the chronicle and by Morice himself, one surmises that these frequent *interregna* represent struggles between the more Africanized elements of the population, who were in a majority and who as a rule supported the ancient royal family, and the less numerous "Moors", whose ancestors hailed for the most part from Malindi and who from a very early date consistently supported either the Wazir or Amir.

Portugal's occupation of Kilwa lasted only from 1506 to 1513, when the garrison was removed owing to the unhealthiness of the climate. Thereafter the rulers of Kilwa remained independent of, but on friendly terms with, their former overlords until the Portuguese were expelled from Mombasa in 1698 by the Arabs of Oman. According to Salil-ibn-Razik, the historian of Oman, the Arabs shortly afterwards took possession of Kilwa. In 1710 the Portuguese Viceroy at Goa was informed that there was an Omani garrison of fifty men on the island,

commanded by Che Nasire (? Sheikh Nasr), who was reckoned a brave and enterprising person. The house of the native Muslim Manna Bakari (Mwana Bakari) had been converted into a fort, but there were only two cannon mounted in this converted building(6).

Arab rule was not popular. On 13th January, 1724, the Viceroy at Goa reported to Lisbon that the King of Kilwa had sent a message to Mozambique asking for help in order to expel the Arabs(7).

In the meantime another nation had begun to show an interest in East Africa. In 1700 the Dutch abandoned the island of Mauritius of which they had been in possession since 1598. Five years later the French East India Company occupied the island. They re-named it "Ile de France" and continued to administer it until 1767, when the French government assumed control. During the eighteenth century the ever-increasing activities of these newcomers caused considerable anxiety to the Portuguese governors at Mozambique, who still had a somewhat tenuous hold upon the coast as far as Cape Delgado and in the islands adjacent to that coast. In 1742 Laurence de Noronha reported that according to intelligence recently received by him the French were planning to take possession of the Kerimba Islands. Amongst other counter measures he invoked the aid of the King of Kilwa, who had agreed to send his son with some troops to one of the islands in that archipelago, where he would assist the few Portuguese settlers and about one hundred coloured troops. Eventually the rumour proved to be false and this assistance was not required(8).

In 1745 Pedro do Rego Baretto, the Governor of Mozambique, reported that, as the result of civil war in Oman, Mombasa had been more or less abandoned by the Arabs and was in the possession of the local inhabitants. The civil war had reached as far as Pate, Malindi, Pemba, Zanzibar, Mafia and Kilwa, where the inhabitants "more or less" recognized the Portuguese as their legitimate overlords. He strongly recommended that the opportunity should be taken for recovering Portugal's lost possessions, more especially as Bertrand François Mahe de Labourdonnais, who was then governor of Mauritius had his eyes on Mombasa, and the English were far too much (*demasiadamente*) frequenting the coast between Cape Delgado and Barawa on the Somali coast. Back in Lisbon the home government fully approved their governor's proposal, but had to explain that it could not immediately be carried out owing to lack of the necessary military force. They accordingly could do no more for the time being than instruct the governor at Mozambique to keep a watch on the movements of the English and the French(9).

In April, 1759, a letter was received at Mozambique from Sultan Hassan bin Sultan Ibrahim bin Sultan Yusuf of Kilwa in which he reported that Mombasa and Pate were at war with the Arabs of Oman and assured the governor of his desire to be on friendly terms with the Portuguese. This and other communications led to a grant to his vessels of unimpeded entry into the ports of the province of Mozambique. In April, 1765, another emissary of the Sultan of Kilwa reached Mozambique bringing with him messengers from Mombasa. These people informed him that the inhabitants of the whole coast wished to throw off the oppressive Arab yoke and would welcome the Portuguese back again. As the result of information given by a certain Mwinyi Kombo, who claimed to be the ruler *de jure* of Mombasa, it was decided in July, 1769, to send a frigate and a schooner with a small party of soldiers to recapture that place. It was believed

that on the appearance of the exiled ruler with his European allies, the majority of the population would rise in his favour and there would be a more or less bloodless revolution. The expedition was, however, badly bungled. There was a long delay at the Kerimba Islands *en route*. According to information given to Morice seven or eight years later the Portuguese ships thereafter proceeded to Malindi to obtain fresh provisions. In January, 1770, the expedition was back at Mozambique. Mombasa had not been recovered and the unsuccessful leader of the expedition had much to say about "the base Muslims who to the ruin of God and His Majesty of Portugal inhabit East Africa". There appears to have been little or no fighting. As an aftermath to the whole affair the Portuguese confiscated Mwinyi Kombo's property in the Kerimba Islands for having misled them as to the political situation(10).

About the time of this fiasco, there were a number of minor revolutions at Kilwa. Sultan Yusufu died at some date between 1760 and 1777 and was succeeded by a Sultana Fatuma binti Ali, who according to the Swahili version of the Kilwa Chronicle abdicated after a short reign in favour of Sultan Ibrahim bin Sultan Muhammad. The last named died leaving two sons according to the Swahili chronicle, or three sons according to the information supplied to Morice a few years later. The Swahili chronicle says:

> "Sultan Yusufu bin Sultan Ibrahim (son of the deceased Sultan) became the ruler. There was trouble in the land for seven years on account of famine and locusts. Sultan Yusufu and his subjects came to an arrangement and the government was handed over to (his brother) Sultan Hassan bin Sultan Ibrahim. People do not know the history of Sultan Yusufu, because he did not rule properly on account of these troubles."(11).

In so writing, the chronicler would appear to deal kindly with the deposed Sultan. According to information given to Morice, he "reigned for two years and was deposed with the consent of both nations (sc. Shirazi and "Moor") because he drank too much".

According to Morice there was an interval of one year between the deposition of Sultan Yusufu and the accession of Sultan Hassan. During that year another nameless brother reigned but eventually "was dethroned because he was of too little intelligence".

In a letter to Cossigny of 7th January, 1777, Morice wrote that Sultan Hassan "has reigned for four years. Everybody is extremely satisfied with him and it would appear that he will reign to the end of his days. The two dethroned kings are both in the island and bear no particular title. Their dethronements did not cause the slightest commotion. If they are dissatisfied with the reigning king, the chief of the two nations meet together. As soon as choice has been made of a new king, the reigning king is told without further ado, 'Sir, it is no longer meet that you should be our king. We have chosen So-and-so to replace you, because we believe that he will govern better than you. So deliver to him the regalia and all the property belonging to the government.' He is deposed in a minute and the other is recognized by the consent of the two nations. From that moment the former king becomes an ordinary subject without a single supporter. It is said this dethronement has never occasioned any revolt. It would appear that the dethroned king is persuaded that his dethronement is just and he resigns himself to submitting thereto."

Morice also informs us that Sultan Hassan was a Shirazi and that he was born at a village some twenty-five to thirty leagues (60 to 75 miles) to the north of Kilwa, where he used sometimes to go and spend several months.

In an answer to a question from Cossigny Morice somewhat modified his statement that the people of Kilwa were extremely satisfied with Hassan as their Sultan. As he explained "the primitive laws of the realm, and not those of the king, are perfectly well known and carried into execution. All innovations encounter very great difficulties and very often are never carried out. Nearly three years ago the present king wished to impose a new tax on the island of Kilwa. The inhabitants opposed it. He exercised all his authority to get it accepted. He left the island of Kilwa and passed over to the continent to muster his troops and compel the island to accept his law by main force. The inhabitants of the island put themselves in a state of defence, being fully resolved to fight him. In accordance with an old custom two notables of the island were sent to his camp. They represented to him the injustice of his proceedings and the horrors which would naturally follow from a war which might destroy part of the island or else result in his defeat. Either after consideration or else through fear, he yielded to these representations and a few days later returned to the island with the deputation and the new tax was never imposed."

One other event of considerable importance appears to have occurred about two years before Sultan Hassan's accession. Despite much wishful thinking the inhabitants of Kilwa had been unable to rid themselves of the yoke of the rulers of Oman. Their hold on their erstwhile possessions in East Africa was tenuous in the extreme and by 1770 would appear to have been confined to Zanzibar and Kilwa. Zanzibar was the headquarters of the Omani government in East Africa. Though the local "Moors" had their own sovereign, the fort at Zanzibar was still in a state of efficient repair and there was a colony of some three hundred Omani Arabs in the island; in addition the island was regularly visited each year by a number of trading vessels from Muscat. By means of these adjuncts the Omani governor was able to maintain an effective supremacy in Zanzibar. There was likewise an Omani governor at Kilwa, who was appointed by the governor of Zanzibar, but he was in by no means as strong a position as his superior officer. As Morice tells us, the fort which the Portuguese had erected, or rather reconstructed, at Kilwa was by this date in a state of complete dilapidation. The governor and such few soldiers as he may have had at his command appear to have been lodged in what had originally been a private dwelling house. Vessels from Muscat, rarely, if ever, made their way as far south as Kilwa. The Omani population on the island was evidently smaller than that of Zanzibar and was of a far more fluctuating character. The moment came when it was possible to effect the bloodless revolution which Morice describes as having taken place in about 1771. In this description the spelling of proper names is his:—

"The island of Quiloa has always had its king, although the Arabs governed it and there was a sort of citadel which could only be taken by means of cannon. The Arabs were there in very large numbers. Most of them used to go to Zanzibar in January, February and March in order to purchase from the Muscat vessels the cargoes which they found there. The Quiloatans took advantage of this absence to notify them that they did not wish them to return any more to their island, as they did not want them. The governor, to whom they gave a different title, was, like the traders, not spared by them. The Arabs had to agree

to this rigorous measure because no forces were sent (to help them). It should be noted that the Quiloatans were supported by the inhabitants of Manfia and of the islands adjacent to and surrounding the kingdom of Quiloa. Nevertheless, the Arabs—I am referring to the governor of Zanzibar—has at the present time nominated one of his sons-in-law as governor of Quiloa, but during the last six years he has never been there. I believe that, whilst he was there, he was a third preponderating power and no more. Those of the Arabs who remained there had orders to withdraw to Zanzibar, which they did. There are no longer any Arabs settled at Quiloa. . . . All this happened without a single blow being struck."

Such then was the political position when in 1775 or 1776 Morice appeared to have sailed for the first time to the north of Cape Delgado. He had proceeded in the first instance to Zanzibar regarding which he had the following to say:—

"The Arabs, who came after the Portuguese, have been in possession of Zanzibar about ninety years. They have obtained possession of all the trade along the coast, that is to say, they and those of them who live in Zanzibar, who have the preference in regard to the vessels, which come from India and bring their cargoes for distribution along the coast. When the vessels from India arrive in December, January and February, all the Moors of Kilwa, Mafia, Mombasa and Pate, assemble at Zanzibar to purchase the cargoes and to distribute them in their districts for ivory, provisions, slaves, etc. In March and April all the Moors and Arabs come to the kingdom of Kilwa to trade for slaves, for it is the assembly point for all the slaves who come from the mainland . . .

"Zanzibar is an island, which was taken by the Moors and over which they have an incontestable right, which they are prepared to vindicate when they think they can be successful. When they do so, I say we ought to negotiate with them to have a port there when the revolution takes place. . . . In Zanzibar there has always been one of the descendants of the former kings of Zanzibar, who bears the title of king and who, when he walks abroad, holds a kind of court. He is publicly called the king of Zanzibar, although he is under the rod of the governor of Zanzibar. The person, who was king last year, died during my stay at Kilwa. Undoubtedly they will elect in his place one of his sons who, like his father, will have the title of king without exercising any authority, which resides absolutely in the hands of the governor named by the Imam of Muscat . . .".

Morice estimated the population at between 40,000 and 60,000, of whom not more than three hundred were Arabs and "in truth it would take very little to dislodge them from Zanzibar". The guns in the fort alone had deterred the Moors from doing so. There was a duty of three per cent on all merchandise imported and exported. Every year there sailed from Zanzibar "a vessel of four hundred tons, loaded with various kinds of merchandise which are sold in the colony in exchange for ivory and the teeth of seacows (sic). Slaves are taken directly or indirectly to Surat, sometimes proceeding there by way of Muscat. A great part is transported to China, but the largest quantity goes to Malabar."

Whilst at Zanzibar, Morice learnt that there were other European competitors in the field. The Portuguese did not send ships to the north of Cape Delgado, but claimed the right to prohibit other nations from trading to the south of that point. Some years before Morice's visit the English commander of the *Bonadventure Grab* had made three voyages to the East African coast in search of

cowries. Dalrymple subsequently reproduced a chart of his entitled *Chart of the Coast from Cape Delgado to Bombass.* The original compiler remains anonymous, but we learn from the letterpress of the reproduced chart that on one occasion he sailed in company with Captain Simon Matcham of the East India Company, who died in 1770 and whose son George married a sister of the future Lord Nelson. The *Bonadventure Grab* made three voyages to Mingoyo in Lindi Bay for cowries. He also obtained cowries in the vicinity of Kilwa from "three small sandy islands", to which he gives no names. On one occasion he lay for two months off the north-west shore of Mafia, where in addition to cowries there was "good water and wood, and provisions cheap". From there he on two occasions sailed north and anchored off Tumbatu, an islet off the north-west coast of Zanzibar, which he found "a good and proper place".

These three voyages would, however, appear to have been more or less isolated trading ventures. According to Morice, at the time of his visit English ships called at Johanna in the Comoro archipelago for provisions and water on their way to India. Their trade was more or less confined to Pate for cowries, but "the Moors of Surat" used to come to other parts of the continent and adjacent islands with two vessels of 300 to 400 tons every year. "They bring salt and cloth for clothing the Moors and Arabs and trade them for slaves."

More serious rivals were the Dutch of the Cape of Good Hope. From the Cape Archives we learn that from about 1748 onwards their vessels had been trading along the coast, principally for slaves[12]. In 1776 one of their vessels, after being refused permission by the Portuguese to trade at the Kerimba Islands, appeared off the coast at a distance of five leagues from Kilwa. Apparently it failed to recognize the port and proceeded to Zanzibar. On arrival at Zanzibar it found there a French vessel belonging to Monsieur de Clonard. As already mentioned, at about this time de Clonard indulged in a "petite guerre", which caused a temporary rupture in the good relations subsisting between the French and the Arab governor. I cannot say whether or not the advent of the Dutch vessel was the cause of this small war. What is certain is that the Dutch vessel was unable to obtain any slaves at Zanzibar and sailed for Pate. Before setting sail, the captain wrote to the Sultan of Kilwa asking for liberty to trade there. The letter arrived whilst Morice was at Kilwa. Morice at once persuaded the Sultan to inform him that such permission would be refused with the result that the Dutch commander, after picking up a cargo of gum copal and cowries at Zanzibar, made sail for Madagascar.

On 2nd August, 1777, the Dutch frigate *Jagstrust* reached Zanzibar. The Arab governor informed the captain that he had orders from his master at Muscat to prohibit trade in slaves to all except two Moorish vessels bound for Muscat. Nevertheless, with the help of two Moorish priests the Dutch managed to ship about a hundred slaves. After the two Moorish ships had left, the governor refused to lift his previous ban, alleging that the right to purchase slaves could only be exercised through him, but with the help of certain "Swaliers who are very good natives and the former possessors of Zanzibar" the captain managed to ship a few more slaves. He was advised by these "Swaliers" to go to Kilwa. The records are silent as to whether he proceeded to that port. He certainly traded at one or more places along the coast and managed to make up his cargo to 328 slaves, which he duly delivered at Robben Island, near Cape Town. After that

Cape records have nothing more to say about trade relations between Cape Town and Zanzibar. Possibly the obstructive attitude of the Arab governor deterred other vessels from proceeding to East Africa(13).

To return to Morice, it evidently was at Zanzibar that he first learnt of the commercial potentialities of Kilwa and decided to proceed there. He later informed Cossigny that "several Moors of other islands whom I saw on my way to Kilwa, told me they would quickly remove their residence to that island so as to select the most advantageous places, when they should see me in residence there, and they have assured me that many of their compatriots would come there with their families." There would seem to be little doubt that the three per cent duty levied at Zanzibar was not popular either with those islanders or the people of Kilwa and that the prospect of being able to evade payment thereof by sending their ivory, slaves and other merchandise southward to Mauritius instead of northward to Zanzibar strongly appealed to them.

The Swahili version of the Kilwa chronicle has this to say about Morice's first visit to Kilwa:—

> "After a very few days great help came to the land. A Frenchman came to trade. The Sultan and all the people made friends with him because they liked him. They did not wage war because the land was suffering from famine when this Frenchman came. They, together with their ruler, obtained great profits. The people fetched goods such as mats, made of palm leaves and worth ten pice, and sold them to the Frenchman for one dollar."(14).

But Morice was interested in other commodities besides mats. The rapidly expanding plantations of Mauritius and Bourbon and the French West Indies called for an ever-increasing labour supply. It would appear that not only did the people of Kilwa provide him with a cargo of slaves, but also that he obtained from the Sultan of Kilwa the promise not only of equally large cargoes in later years, but also a right of pre-emption of all slaves at Kilwa to the exclusion of the Dutch and slave traders from other European nations.

We have no information as to whether this promise was written or verbal. Whichever form it may have taken, the Sultan had given some earnest of his good faith by refusing to allow the Dutch ships to trade at Kilwa. Nevertheless, Morice realized that he needed some sort of official backing if he was to hold the Sultan to his pledged word. A Dutchman or some other European might arrive during the absence of Morice and submit a more tempting offer, to which the Sultan might readily succumb. It was for that reason that Morice sought the support of either the outgoing or else the incoming governor of the Ile de France, but neither governor appears to have been ready to help. After this want of success he sought to arouse the interest of de Cossigny de Palma. This last named was evidently sympathetic but at the same time extremely cautious. Before committing himself in any way, he requested Morice to return to the East African mainland and to furnish him with a detailed report as to the soil of the countries visited by him, the customs of the inhabitants and the possible usefulness of those countries to France.

Morice left Mauritius in about September, 1776. On 7th January, 1777, he wrote as follows from some unnamed place on the east coast of Africa:—

"On the thirteenth day after my departure from Ile de France at one quarter hour after midday I anchored in the vessel *Gracieux* in Quiloa roadstead. My first care was to go on board the *Abysinnie* in order to learn whether the Moors were observing the letter of the treaty which I had made last year. It was confirmed to me by the Captain that it was so. I then landed on shore to express to the king and the Moorish *Cheq* (Sheikh) the satisfaction I felt at their having abided by their engagement. They could not contain themselves for their joy at seeing me return with two vessels. The flattery which I received increased every day. The next day I made a treaty with them, a copy of which I am sending for forwarding to Monsieur de Sartine by the means which you consider the safest. I propose to send a duplicate to Monsieur de Sartine from the Cape of Good Hope. They made offers of every description to me, if I should desire to dwell among them and to accept me or anybody else I should like to name as their Sheikh. All these things are sure guarantees of their desire and need to have Europeans amongst them. All these things invite us to seize with alacrity the generous offer which they have made of placing their country in our hands."

Annexed to his letter is the treaty which he had made three months previously. It reads as follows:—

"We, the king of Quiloa, Sultani Assem, and (sic) bon Sultani Ibrahim and ben Sultani Yousou Cherazi, Quiloa, have given our word to Monsieur Morice, a Frenchman by nationality, that we will give him one thousand slaves yearly for twenty piastres per head, and that he will give to the king a present of two piastres for each head of slave. Nobody else will be allowed to trade in slaves, whether French, English, Hollander, Portuguese, etc., until he shall have received his slaves and does not want to take any more. This contract is made for one hundred years between him and us. As a guarantee of our promise we have given him the fortress in which he may place a number of cannon and fly his flag. The French, the Moors and the king of Quiloa shall henceforth be as one. Those who attack one of us will attack us both. Done the 14th October, 1776.

(Sd.) "Morice".

(Two Arab seals).

"We, the undersigned captain and officers of the vessel *Abbysinnie* private merchantman belonging to Monsieur Morice, certify to all of whom it may concern that the present treaty was made in our presence at Quiloa the 14th October, 1776."

(Signed) "Pichard"
"Pigné"
"Briard".

Morice sent this treaty ahead of himself by one of his vessels to the Ile de France with a covering letter to de Cossigny de Palma. "You will see", he wrote, "my companions in my labours without seeing myself. Question them on every point and you will be convinced of the necessity of taking possession of a country which has been so generously given to me." If the French government did not take speedy action, "it is a wager of one hundred to one that before three years are passed the Hollanders will be there." He urged Cossigny to lay his letter before the new governor, Antoine de Guirane la Brillane, who "perhaps could enter in his instructions something which would have a bearing on the subject."

Cossigny, however, was still not prepared to commit himself. He wanted further and better particulars in regard to a number of matters before he gave his benediction to the project by recommending it to higher authority. He accordingly waited until Morice himself returned to the Ile de France, when he sent him the series of *questionnaires* to which reference has been made at the beginning of this paper.

Morice *en bon citoyen* was ready to hand over his rights under the treaty to the French government. His answers to Cossigny's questions show that he contemplated the establishment in due course of a French colony similar to that already existing in the Ile de France with its capital on Kilwa Island and French-owned plantations both there and on the mainland. The French East India Company, which had administered the Ile de France, had been dissolved in 1769. Morice urged that a similar company should be floated to finance and execute his scheme. His planning went far beyond the founding of a small colony based on Kilwa. He stressed the fact that Arab, like Portuguese, influence was on the decline and that the Africans and Moors were extremely anxious to evict the Arabs of Oman once and for all. He had visions of wresting Zanzibar from them, and gradually extending French influence as far as Cape Guardafui.

Cossigny, however, was not anxious to encourage quarrels with Oman. Whilst appreciating the advantages of the Kilwa project, he reminded Morice that "it is essential for our nation to remain at peace with the Arabs so as to obtain from them liberty to trade at Muscat, as that town is the only considerable outlet that exists on the African coast for the sugar and other products of the Ile de France." Good trade relations with Muscat "would facilitate our commercial contact with the Persian Gulf and Surat and would enable us to spread our trade along the Arabian coast." In the circumstances, would it not be desirable to have a French "establishment" at Muscat either instead of, or in addition to, that at Kilwa? Morice emphatically replied in the negative. Trade between Muscat and the Ile de France was relatively insignificant. What was of far greater importance to the Ile de France and Bourbon was a market where they could purchase slaves to work on their plantations. For that purpose Kilwa was the best spot on the East African coast. With this representation Cossigny felt disposed to agree, but at the same time he expressed strong disapproval of any attempt to evict the Arabs from Zanzibar. This would obviously arouse the enmity of the Imam of Muscat who "has close relations with Surat and might perhaps call to his aid the English who love to creep in everywhere, especially if it is a matter of harming us and extending their trade and dominion." Morice was obviously the most likely person to be placed in charge of any settlement at Kilwa. He was accordingly reminded that "peaceful trade is the most obvious and proper thing for us, and we ought not wantonly to discard our opportunities in that respect at Muscat". Morice submitted to this warning. "Your remarks", he replied, "about the English are very true but if the Hollanders get a chance, you will see that they will not be timid as we are."

At the end of his interrogation of Morice Cossigny set out in sixteen pages a "projet d'un établissement" at Kilwa supporting Morice's proposal. One presumes that the project and its numerous annexures was in due course sent to the governor, Monsieur la Brillane. There is, however, no record of it at the present time in the Mauritius archives. What appears certain is that the project was not taken up very wholeheartedly by the French Government.

The Swahili version of the Kilwa Chronicle tells us that some time after the visit of Morice "there came a French man-of-war which gave a customary present (*ada*) to the Sultan consisting of rich gifts (*bizaa*) and money."(15) Morice had recommended to Cossigny the giving of such a present to the Sultan. It is therefore possible that the man-of-war in question was not an armed merchant vessel belonging to Morice or some other private trader but a government vessel on a special mission to announce official ratification upon the treaty with Morice and to seal it by the delivery of a special present.

The Swahili chronicle gives us the following information as regarding events which followed upon the visit of this French man-of-war:—

> "Sultan Hassan died. Then Sultan Yusuf bin Sultan Hassan ruled. The people agreed to accept him because of his might. They paid customs dues in respect of corn. Their occupations were cultivating, fishing, and trading. The Frenchman lived there as we have already mentioned. This Sultan rebuilt the *boma* at Shangani. He did not build a new one for himself."(16)

According to Portuguese historians this establishment at Kilwa was being maintained by the French government. Thus, Corvo tells that "the French at this time, by a convention with the king of Kilwa, got possession of the commerce of that place and of the coast adjoining Kerimba" and that, despite repeated orders from Lisbon, the governors of Mozambique connived at their trade and even allowed the French ships to call at Mozambique under colour of repairing damage to their vessels(17). Bordalo repeats this statement and adds that the French carried on trade from Kilwa with Lourenco Marques, where they sold arms and ammunition to the local inhabitants(8).

In 1812, while on a visit to Kilwa the officers of H.M.S. *Nisus* were given certain additional information about the French occupation. James Prior, the surgeon of that vessel, learnt that at about the beginning of the American war of independence "an adventurer from the Ile de France touched here on a commercial speculation. The Sultan highly rejoiced at a direct intercourse with Europeans, received him well, promoted his views, and he soon returned with a full cargo of slaves and ivory in exchange for arms, ammunition, tobacco and some dollars. This success encouraged others. Several large vessels arrived from France to carry slaves to Java and other ports of the East, as well as their own and the Spanish West Indies. A frigate was also despatched from Mauritius to form a commercial treaty with the Sultan. This agreement fixed the price of prime slaves at thirty-two dollars, or about £8 sterling per head."(19)

The frigate referred to by Prior would appear to be the man-of-war of the Swahili chronicle. If so and if the figures supplied to Prior were accurate, it would appear as if Morice's treaty was followed up by another with the French government at Mauritius. It will be remembered that Morice had agreed to pay twenty piastres a head for slaves plus an extra two piastres a head as a present to the Sultan. The piastre was in reality the Spanish "pillar" (pilaster) dollar which had a wide circulation in the eighteenth century and it would appear as if Sultan Hassan had decided to improve on his previous bargain when it came to dealing with representatives of the French government. In the words of Prior, "the Sultan, however, though so cheap a dealer in men, was not long suffered to enjoy a monopoly in the human shambles."(20)

The date at which he lost this monopoly would appear to have been at the end of 1784 or the beginning of 1785 and the loss would appear to have occurred in the following manner. Ahmed bin Said, founder of the ruling Busaidi dynasty in Oman, died at the end of 1783 or at the beginning of 1784. He was succeeded as Imam of Muscat by his son, Said bin Ahmed, who had a rival claimant to the post in a younger brother, Seif bin Ahmed. This brother realized that he had little chance of successfully asserting his claim in Oman. Accordingly, he and his supporters embarked in several ships and sailed for Zanzibar, where he hoped to carve a dominion himself out of the bygone possessions of Oman in East Africa.

Seif bin Ahmed reached Zanzibar in the early days of 1784. The Omani governor refused to hand over the place to him, whereupon Seif laid siege to the fort. The subsequent military operations were of an extremely desultory character, but the ranks of the besieged began to thin owing to desertions. It appeared inevitable that Seif would become master of the fort, but he delayed to take any decisive action.(21)

The main reason for Seif's inaction at Zanzibar would appear to have been because he detached part of his forces under his son Ali to recover some of Oman's lost dominions in East Africa. The Swahili version of the Kilwa Chronicle tells that "there came to Kisiwani Seyyid Ali bin Sefu el Busaidi. He came from Muscat. He went to the ruler (*Mfalme*). Then the ruler gave him a fort (*gereza*) near the present market (*soko*) and he dwelt there. But Seyyid Ali bin Sefu came because of his strength with his dhows (*zombo*), his people and his property."(22) In the meantime, back in Zanzibar, Ali bin Seif's father continued delaying to deliver the knock out blow, hoping no doubt to starve the garrison of the fort into surrender. Finally at the end of the year the north-east monsoon set in, bringing with it a relieving squadron from Muscat under the command of Sultan bin Ahmed, the Imam's brother, and Ahmed bin Said, the Imam's son. Sultan got into communication with his brother Seif and managed to convince him that resistance to the relieving forces would be futile. He then allowed his brother to proceed to Lamu, where he died a few years later.

The newly installed Omani garrison at Kilwa had perforce to submit to the Sultan bin Ahmed and Ahmed bin Said. Kilwa once more became subject to the Imam of Muscat. According to Prior, Ali bin Seif was allowed to retain possession of Kilwa and the island of Mafia. He was still residing at Kilwa when the *Nisus* visited the island in 1812 but had farmed out the revenues to a merchant, named Abdulla, who was also governor of Mafia.(23)

History does not relate what happened to the treaty subsisting between the Sultan of Kilwa and the French, but one infers that it went by the board. On 24th August, 1803, a French trader, named P. Dallons, reported that the governor of Kilwa was remitting six thousand piastres each year to the Imam of Muscat and was imposing customs duties according to his own free will and that the French were having to pay a capitation tax of twelve piastres for each slave.(24) According to information given to Prior in 1812 that tax had been reduced to eight dollars per head.(25) The war which broke out between Great Britain and France in 1778 and lasted until 1783 led to a great deal of fighting between British and French fleets in the Indian Ocean and must inevitably have seriously dislocated commercial intercourse between Mauritius and East Africa. It may therefore well be that little or no trade was being carried on by the French at Kilwa at the time that the Omani Arabs recovered that place.

What is certain is that it suited French policy to accept the *fait accompli* without demur. As de Cossigny de Palma had told Morice in 1777, it would have been highly impolitic for the French to take sides against the Imam in his quarrels with any of the inhabitants of East Africa. His friendship was extremely desirable and any sign of hostility might force him to ally himself to the English. As long as the Imam's governor at Kilwa was not too exacting in his demands, it was judicious to keep on good terms with him for the sake of trade. If he became over-rapacious, representations could be made to Muscat.

French merchant vessels continued to visit Kilwa until near the close of the Napoleonic wars. In 1809 the Bishop of Mozambique informed Captain J. Tomkinson of H.M. Sloop *Caledon* that he understood that the French were trading to Kilwa for slaves, ivory, rice and corn.(26)

One result of Cossigny's lengthy interrogation of Morice is that we have a very full and detailed account of conditions in Kilwa and the adjacent islands during the latter part of the eighteenth century.

Perhaps the most interesting of all the information he gives is that in regard to the fresh water lake which he calls Zultan or Zembre and is undoubtedly Lake Nyasa. In a letter to Cossigny he tells us that it "is distant one month's march from the east coast, a distance which I estimate at seven or eight leagues a day. This lake ebbs and flows with a difference in depth of eight feet. It takes two days to cross it in a boat propelled by six rowers. There are some islands more or less in the middle where the boats, which are going to cross it, make a halt. This river is very deep and can take the largest vessels. On the other side there is a vast country, which has been crossed by natives of the country, who after a journey of two months have reached the (Atlantic) Ocean and have seen there vessels which are navigated by Europeans. There is every reason to believe that this is the coast of Angola. In proof of the fact that they are so inquisitive as to make such a journey, I have seen people who have made it; and all of them have assured me that they have found the tribes unequalled in their gentleness and their hospitality. A single person could go with an interpreter from village to village and be sure of being supplied with guides." Morice was also told of a river running from the north-east to the south-west and "loses itself in the Ocean by two mouths", one of those mouths being "in the river of Sena", or in other words, the Zambezi. The river flowing out of the lake is of course the Shire, which enters the Zambezi a few miles to the east of Sena.

With regard to the dominions of the Sultan of Kilwa, Morice tells us that:

"This kingdom formerly extended from Mozambique, situate in fifteen degrees (of south latitude) to the Cape of the Islands of Hinaigie situate in seven degrees (of south latitude). Its length is 160 leagues (about 400 miles) and in depth it reaches to the fresh water lake, of which I have spoken to you. . . . Mozambique as far as Cape Delgado is today independent of Kilwa. The king of Kilwa has ceded to the Portuguese all this coast in consideration of an annual tribute of 1,500 crusados, which they have not paid for the last fifteen years or thereabouts. This kingdom of Kilwa today extends from Cape Delgado to the Cape of the Islands of Hinaigie, being a distance of eighty leagues (about two hundred miles).

The Cape of the Islands of Hinaigie, which Morice says lay in the seventh degree of south latitude, would appear to equate with Ras Ndege, a few miles to the east of Dar es Salaam. A little to the westward of this cape there commences a chain of islands and reefs, which lie at an average of two miles off the mainland and skirt the coast for about twenty miles to the north-west.

One decidedly queries the statement that the Portuguese ever paid tribute to the rulers of Kilwa. In veiw of the history of the relations between Portugal and Kilwa the story is distinctly improbable. Morice does, however, mention that the Sultan's realm extended to the south of Cape Delgado, "where are people known by the name of Tongui" otherwise Tungwi, a village which came into prominence in 1889, when the Portuguese proceeded to bombard it on assertion of a claim of ownership as against that of the Sultan of Zanzibar, the successor in title of the Sultan of Kilwa.

Morice reports that islands lying off the Sultan's coastal domains (including Mafia) were independent of Kilwa. All these islands were inhabited by Moors. He was given to understand that "they form amongst themselves a sort of republic in which each island has its chief". He believed that, if it came to a matter of war between the Omani Arabs and the Moors of Kilwa, these islanders would come to the assistance of the latter.

Writing of Mafia, Morice tells us that "there are in the island a kind of caste of Africans, who live in the woods and keep apart from the Moors and some Arabs. This caste is free and lives in its own fashion and, although they are very numerous, they submit to the vexations of the Moors without a murmur". One ventures to suggest that the "caste" was in reality the Wambwera.

Morice has not much information to give regarding the mainland territories of the Sultan of Kilwa. The claim that these extended as far inland as Lake Nyasa may be very much discounted. In answer to a question which Cossigny put to him, Morice himself wrote:—

> "I used to think that neither the Moors nor the Arabs were allowed to penetrate into the lands (of the interior), but the Moors can go everywhere. The Arabs, who go there, dress themselves like Moors and in this guise go so far as the fresh water sea, which I believe to be a large lake known by the name of Zultan or else by that of Zembre. I am told that the Africans do not permit those who are on this side of the river to go and trade on the other side. Consequently, the land of the King of Kilwa is bounded by this river, or perhaps its boundary may be even further back."

One gathers from this statement that the caravan trade between Kilwa and Lake Nyasa was probably still in its infancy and was regarded by Arabs as a somewhat risky undertaking, necessitating the adoption on their part of the guises of "Moors". It would also appear reasonable to infer that the Sultan's writ did not run very far into the interior and that the "Moorish" trader was very much dependent for business on the goodwill of the local tribes.

The Sultan of Kilwa appears, however, to have had a fairly effective control of the coastal belt extending from Tungwi, just to the south of Cape Delgado, as far as the Rufiji delta. This contained a mixed population of "Moors" and Africans, the latter being very much in the majority. As already seen, the birthplace of Sultan Hassan was a village somewhere near the Rufiji delta. We know that the last stage of Gaspar Bocarro's journey from Tete on the Zambezi to Kilwa

brought him in 1616 to "Bucury, a village of the Moors", which appears to have been about six hours' march from the mainland immediately opposite to Kilwa.(27) As Diego de Couto tells, Moors were already in possession of plantations on the mainland immediately opposite to Kilwa in 1589, when the Zimbas crossed over and sacked Kilwa Kisiwani.(28)

Though there were several good natural harbours between Cape Delgado and Kilwa, they do not appear to have attracted much commerce. Morice gives the names of only four places besides Kilwa along the coast, namely, Tongui (Tungwi), Quindarmis (Mikindani) and Mongal (Mungoya) and Quivinge (Kilwa Kivinje). He does not appear to have visited any of these places and does not tell us what sort of trade was being carried on there. With the exception of Tungwi all those places were said by him to be in the possession of Moors. In the legend to a *Plan of the River Mongallou on the East Coast of Africa*, which is dated "31st April (sic), 1789", and was delineated by Alexander Dalrymple from a French MS, it is stated that "the blacks are very fine and at a good price. The Moors are the proprietors of the country and carry on a great trade as well in blacks, which they send to Quiloa, as in ivory, which they sell to the Arabs." Morice informed Cossigny that "there are several posts on the mainland to which the Africans bring their slaves and their ivory between Cape Delgado and Zanzibar, but these are only on the coast". Though Morice gives no names, those ports doubtless included the place above mentioned on the mainland.

Many of the Moors appeared to have devoted themselves more or less entirely to agricultural pursuits, though doubtless they were ready to turn their hands to a little dealing in slaves, ivory and other commodities, if a suitable opportunity offered itself. The island of Kilwa and of certain other coastal places were not entirely self-sufficing and during the trading season between December and April visiting merchant vessels needed victualling for both crew and slave cargoes before they set out on the voyage to Zanzibar. The demand therefore greatly exceeded the needs of the permanently settled population. Morice informed Cossigny that two islands in Port Nisus to the south of Kilwa Kisiwani were "sown and cultivated by Moors assisted by their slaves, just as in the mainland by Moors and free Africans." Morice calls these two islands Ile Morice and Ile de l'Esperance. Ile Morice equates with Sanji ya Kati. In 1812 the island was "barren and uninhabited". It still figured as "Morice Island" in the fifth edition of James Horsburgh's *India Directory* (issued in 1841).

Speaking generally of the mainland Morice informed Cossigny that "all the people are stationary and in no way nomadic. If they sometimes abandon their villages, the abandonment is due to herds of buffalo and, more often, of elephants, which come and ravage their plantations. I have seen a district on the sea coast which has been abandoned for this reason.

"The people have recognized the authority of the king from time immemorial. I do not know whether they originally submitted freely or by force.

"Each tribe is governed by a chief, who is nominated at Kilwa. Perhaps they have in each village differences the one from the other in regard to their general and particular laws.

"There are some villages on the continent which have Moors for their chiefs and others have Africans. They trade by right and come to Kilwa to deliver the slaves, foodstuffs and ivory which they have for sale.

"There is hardly a family of Moors which predominates in any village, because most of the people are Africans who wish to pass themselves off as Moors. They are dependents of the king and the chief Moor. Their nomination (to the chieftainship) is according to the preference of the king. I am, however, told that the chief Moor plays a large part in their nominations."

Morice estimated the permanent population of Kilwa at between two and three thousand, but this number was considerably increased during the trading season. One twelfth to one tenth of the population were Moors, one third were free Africans and the rest slaves.

As the treaty of 1776 shows, the Sultan of Kilwa was a Shirazi, that is, a man of mixed Persian and African ancestry, who was evidently classified by Morice as a free African in contra-distinction to a Moor, who, though of mixed Asiatic and African blood had a larger strain of Asiatic blood than had a Shirazi. The Sultan claimed, in all probability on very good grounds, to be descended from the first Persian immigrants from Shiraz, who arrived at Kilwa in the tenth century A.D. The Swahili version of the Kilwa Chronicle says this progenitor married a daughter of a local African chief and further inter-marriage with others of the daughters of Heth must in the course of centuries have considerably diluted the original Persian strain. But, as both the Arabic and the Portuguese versions of the chronicle show, though Amirs and Wazirs might from time to time supplant members of the original royal family on the throne and endeavour to establish a new dynasty, the general trend of events invariably led in course of time to the family of the former Sultans coming back into their own again.

Cossigny put a number of questions to Morice regarding the then ruler of Kilwa. In reply he was told that:—

> "His dress is his only mark of royalty. When he walks abroad, musical instruments are carried behind him. He alone has these. He never goes out without a bodyguard of ten, twelve, or twenty persons. Guards and almost always one or two executioners accompany him. The Moors and the Africans have an infinite respect for him. Nobody ever sits in front of him. This is absolutely forbidden, just as with us it is forbidden to be covered in front of the king.
>
> "Generally speaking he dresses like all Moors, but rather more luxuriously. I have never seen him wearing any distinctive dress. There is nothing in the luxury of his dress to distinguish him from the Africans. His bodyguard and his escort always mark him out. He always takes precedence over the Wazir when that Sheikh is in his company. Very occasionally his guards are armed with muskets, sword, round shields, assegais, and bows and arrows dipped in strong and fatal poison."

In his letter to Cossigny of 7th January, 1777, Morice points out that the "king" was very far from being the real power in the land. "The Moors are the actual governors and law makers. None of them has ever wanted to be king. But a Moor is always the first Wazir. He it is who, without any authority from the king, declares the laws of the Prophet. This Moorish Wazir has extremely wide authority. He tries offences committed by Moors. Although he is all powerful, the king cannot punish a Moor with death for any crime committed by him, unless the Wazir consents. The Wazir bears the title of Malindani. On the other hand, the Wazir cannot punish with death any African without the consent of the king. But each of them can punish his slave, even though the other is

opposed to it. Such a case is extremely rare. It suffices that one of them can pardon the offender, if he thinks fit. You see therefore that there are two nations which are apparently united under one chief, although there actually are two chiefs. But all of them are subjects to the same law. The Africans recognize that they have need of the Moors, firstly, because they cannot govern themselves and become a great nation owing to the small extent of their knowledge. They are also convinced that without the Moors they could not control a single village and still less a wide and extensive country."

As already said, this diarchy dates back many years to a time when Malindi was a serious rival in East Africa, both politically and commercially, of Mombasa, and was able to wring considerable extra-territorial rights from the Sultan of Kilwa including, as the Swahili version of the chronicle says, those of *uamri* (government) and *ukadhi* (administration of justice). As both the Portuguese and Arabic versions of the chronicle show, the Malindani was frequently a king maker, ready at times to unmake his puppets and even to step into their places. But he belonged to a community which numerically was in a minority. Practical wisdom therefore generally taught him that it was usually impolitic to sit on the Sultan's throne and wiser to stand beside him, when he was seated, ready to give advice where necessary and to seek for a new and more compliant sultan, if that advice was rejected by its recipient.

As Morice afterwards told Cossigny, the appointment to the post of Wazir was in the hands of the Sultan, but he was always the Malindani and had to be chosen from the ranks of the Moors. Presumably, the person chosen had to be the nominee of the Moorish community. In theory, and possibly upon rare occasions in practice, the Sultan would also deprive the Malindani of his post, but, as Morice said, "if he does so out of caprice, he will be confronted with very strong protests which may lead to rebellion. In particular, if his successor is not agreeable to the Moors, he (the Sultan) will no longer have a bodyguard or the respect of the slaves who accompany him." In other words, he would realize that he had been served with a very clear notice to quit.

Morice has this to say about the dual jurisdiction in Kilwa in the administration of justice:—

> "In the case of a crime the king assembles the Sheikhs of the two nations and takes their advice. When their advice is decided, that of the Africans is followed in the case of Africans and that of the Moors in the case of Moors; but it is rarely that there is a difference of opinion on either side in regard to their advice.
>
> "He (the king) has the power of life and death, but rarely puts anyone to death without taking the advice of the Moorish and African chiefs, whom he assembles for the purpose of giving their advice. This advice takes the form of punishing every crime according to custom, which is always followed. They punish by death with a club, sword or rope or by loss of liberty."

Though courts might be convened for the purposes of trial of offences, Morice doubted whether there was any such thing as a national assembly, which would be convened to discuss changes in the law or questions of policy. "Kilwa", he told Cossigny, "is the centre of everything. I have never seen an assembly and do not know how it is convened. Nevertheless, for the purpose of signing the treaty which was granted to me, the king, his children and the principal Moors were present."

Morice had this to say in regard to the religious beliefs of the inhabitants:—

"He (sc. the king) has adopted the religion of the Moors in its entirety. With regard to customs, he has not adopted them completely. With regard to the Africans on the sea coast, they make a semblance of being Mahometans. Those of Quiloa are all accounted Mahometans.

"The Moors are very much attached to their religion. Great respect is given to the title of Mufti. He is generally the notary of the district. If he is not a Sheikh he has little authority, but he is nevertheless well thought of. There is only one in each large village; but it is well known that Mahometans send their missionaries everywhere."

The revenue of the Sultanate was derived from customs and excise duties and "presents" to the Sultan for permission to trade and assistance in such trading. Arabs paid a duty of seven per cent on ivory but, except for the present of two piastres per slave to the Sultan, Morice had obtained liberty to trade in and sell every kind of merchandise free of duty.

Very little coinage was in use at Kilwa. The Imperial crown (better known in later days as the Maria Theresa dollar) was accepted as currency as was the Venetian sequin (*zecchino*). These were reaching Kilwa by way of the Red Sea and had the merit of being accepted as current coin at Muscat. The inhabitants of the mainland, however, had little or no use for coins of any description, except possibly for purposes of adornment. Cowries were obtainable in the region of Cape Delgado, but they were not as large as those obtainable in the Kerima Islands farther to the south and were not regarded by Morice as having any great commercial value. The inhabitants of the continent did not use them as currency. Such few as were exported went to Bengal, but Morice reported that "they are worth nothing on the coast of Guinea".

Morice proposed the setting up of a French quarter on the island of Kilwa in the vicinity of the fort. Towards the end of his many questionnaires Cossigny asked:—

"Does Monsieur Morice think it would be proper for the Moors and Africans to settle there, provided they conformed to our regulations, but allowing them freedom to exercise their religion and leaving to them their manners and customs?"

The reply was:—

"I think this will be necessary, without interfering with their manners, customs and religion. The Moors will never conform to ours. Let us reciprocate at any rate in the early years."

As Cossigny's final observations show, he fully concurred in this reply.

It is not easy to locate the fort which Sultan Hassan was prepared to hand over to Morice as a pledge for the fulfilment of his contract for the supply of slaves. According to M. H. Dorman the present-day inhabitants of the island know of three different sets of fortifications. One (known as the *boma*) is near the north-west corner of the island, facing the mainland at a point where the channel separating the island from the continent is narrowest. Its surrounding wall is still traceable. Dorman, who considers it to be Arab rather than Persian, describes the building within the walls as "now a jungle of fallen masonry".[29]

About five hundred yards further to the north of this *boma* at the north-western point of the island is the present Arab fort. J. P. Moffett and Dr. Gervase

Mathew suggest that it was built shortly before the coming of the Portuguese and was perhaps burnt when the cannibal tribe of the Wa-Zimba sacked the town in 1587.(30) It was restored at about the end of the eighteenth century, as is indicated by the Arabic inscription over the carved wooden door, which informs us that "In the name of God the Almighty the All Merciful, we have opened this door on 23 Muharram". The year is apparently not easy to read, but Messrs. Freeman-Grenville and Kirkman have deciphered it as being 1204 A.H. which would make the date equate with 2nd October, 1789. This date suggests that the restoration was the work of Seyyid Ali bin Seif El Busaidi after his capture of Kilwa four years or so previously.

On the north shore of the island half a mile further to the east are two large ruins separated from each other by a gully. Dorman tells us it is "set on the edge of a cliff fifty feet high in the best position that the terrain offers commanding a view over the surf of the outer reefs to the open sea." The ruins are unmistakably European in form and local tradition says it is the fort of St. Jago built by Francis d'Almeida in 1505. On the opposite side of the gully are some ruins described by Dorman as being on "slightly the better site being built right on the edge of the cliff. It is now in a very dilapidated state as if the fort had at some time been sacked. It . . . is not European in conception and is referred to by the natives as Husuni, in contra-distinction to San Jago, the Gereza and the Boma."

Morice's information does not greatly assist us in the identification of the fort which was handed over to him. He informed Cossigny that it was built by the Moors "when they came to this island with forty sail 963 years ago. It fell into ruin owing to old age and lack of repair. It is considerable. Inside it are the ruins of barracks, stores and houses, which were built there. It is on the seashore and commands the passage to the north. I doubt if cannon balls could reach the top of the walls, because it is so high." In answer to other questions he stated that "it is by the northern passage, for which it is a perfect defence . . . The sea lies at the foot of the walls. At the present time it is one hundred feet above the sea, which washes a quarter of its circumference."

One ventures to doubt the information regarding the antiquity of the fort as supplied to Morice. Though any other person's guess is as good as my own, I venture to suggest that Morice's fort was either Husuni or else its neighbour on the other side of the gully.

Wherever this fort may have stood, there is no evidence that either Morice or any compatriot of his either occupied it or attempted to restore it. There is in fact very strong ground for believing that no such attempt was ever made. Morice himself estimated that it would cost a million francs to put the place in order and that it would then require a garrison of one hundred and fifty men to man it. Such an outlay was beyond the purse not only of Morice himself but also of the colonial government of the Ile de France. In all probability it was this prohibitive cost which, as much as anything else, put an end to Morice's dreams of achieving in East Africa what Dupleix had once tried to achieve in India.

AUTHORITIES CITED IN NOTES

Barnwell, P. J.—*Visits and Despatches (Mauritius, 1598–1948)* (Port Louis, 1948).

Barnwell, P. J. and Toussaint, A.—*A Short History of Mauritius* (London, 1949).

Bordalo, F. M.—*Ensaios sobre e Estatistico des Possessoes Portuguese* (Lisbon, 1859).

Corvo, J. de A.—*Estudos sobre as Provinciaes Ultramarinas* (Lisbon, 1883–1887).

Dallons, P.—*Reflections sur les divers Etablissements Arabes sur la cote d'Afrique* (Mauritius Archives Vol. G. A11. No. 119).

Dalrymple, Alexander.—*Collections of Charts of South and East Africa.*

Dorman, M. H.—*The Kilwa Civilization and the Kilwa Ruins*—(1938) T.N.R. No. 6 pp. 61–72.

Guillain, M.—*Documents sur . . . l'Afrique Orientale* (Paris, 1856).

Horsburgh, James.—*The Indian Directory* (5th Ed.) (London, 1841).

Jackson, Mabel V.—*European Powers and South East Africa* (London, 1942).

Jeffreys, Kathleen M.—*Kaapse Archiefstukken* (Capetown, 1926).

Moffett, J. P. and Mathew, A. G.—*Tanganyika's First Colonists—New Findings at Kilwa* (East African Annual, 1951–52 pp. 159–182).

Morice.—*Projet d'un Etablissement a la Cote Orientale d'Afrique* (Rhodes House Ms.Afr. R.6).

Prior, J.—*Voyage . . . in the Nisus Frigate* (London, 1819).

Pullicino, P.—*Aulad el Imam* (Zanzibar, 1954).

Strandes, J.—*Die Portugiesenzeit von Deutsch-und-Englisch Ostafrika* (Berlin, 1891).

Strong, S. A.—*The History of Kilwa* (Journal of the Royal Asiatic Society, 1895).

Theal, G. M.—*Records of South Eastern Africa* (London, 1898–1908).

Velten, C.—*Prosa und Poetrie der Suaheli* (Berlin, 1907).

Welch, S. R.—*Portuguese and Dutch in South Africa, 1641- 1806* (Capetown 1951).

NOTES

(1) Barnwell pp. 136, 137, 168, 172; Barnwell and Toussaint pp. 73-74, 83, 88, 105-106.
(2) Velten p. 246.
(3) Theal iii. 94.
(4) Theal vi. 286.
(5) Velten p. 249.
(6) Strandes p. 276.
(7) Strandes p. 278.
(8) Welch p. 533.
(9) Botelho, J. J. T.—*Historia Militar e Politica dos Portugueses em Mocambique (Lisbon, 1934), i. 490.*
(10) Strandes pp. 203, 204.
(11) Velten pp. 246, 247.
(12) Jeffreys pp. 46, 47.
(13) Jeffreys pp. 140, 141.
(14) Velten pp. 247, 248.
(15) Velten p. 248.
(16) Velten p. 248.
(17) Corvo ii. 286, 287.
(18) Bordalo iv. 29.
(19) Prior p. 67.
(20) Prior pp. 67, 68.
(21) Guillain i. 556, 557.
(22) Velten pp. 248, 249.
(23) Guillain i. 557, 558.
(24) Dallon MS.
(25) Prior p. 68.
(26) Theal ix. 92.
(27) Theal iii. 418.
(28) Theal vi. 399.
(29) Dorman, T.N.R. vi. 67.
(30) Moffett and Mathew—E.A. Annual (1951-52) p. 175.
(31) Dorman, T.N.R. vi 67.

CONGO SWAHILI

By Lyndon Harries, M.A., Ph.D.

Editorial Note: The following article outlines a "dialect" of Swahili related more closely to "kitchen" Swahili or "KiSettla" than to genuine local dialects. It is thought that those of our readers who have occasion to visit the Belgian Congo may find it interesting and amusing to have an idea of the sort of jargon that they are likely to hear.

In a previous article the place of Swahili in the Belgian Congo was outlined.[1] It may interest readers who speak Swahili to know something of the kind of Swahili spoken by both Europeans and Africans in the Congo. The term "Congo Swahili" is being used by an important Mission in the north-east Congo to denote a form of basic Swahili which the Mission is trying to promote, but here the term applies to the actual forms of the language already in use. The following notes were taken during a six months visit to the eastern half of the Congo on behalf of the School of Oriental and African Studies, University of London.

Principal Features

The following are some of the principal features of Congo Swahili:—

1. Absence of a series of nominal class-prefixes. The prefixes mu–/ba– are the only nominal prefixes; with words that in standard Swahili belong to other classes plurality is expressed with the ba– prefix. Note, however, "kitu/vitu" though "bakitu" may be heard.

2. Absence of agreement in adjectives, except in Cl. I. "Muzuri, mingi, kidogo, mukubwa, mubaya" are invariables.

3. The personal pronouns are:

mie, I, me	sie, we, us
we, you (singular)	nie, you (plural)
ye, he, him, it	babu, they, them.

These are self-standing, and are used either as a complementary subject or as an object. The pronominal object is never included within the verb in Congo Swahili, but occurs after it, e.g.:—

Nitapiga babu, I will beat them.
Ulikamata ye? Did you take it?

The plural forms are used as inclusive pronouns, in which the second person concerned is included in the plural pronoun, e.g.:—

Babu na bibi yake *He* and his wife.
Sie na saiba yangu, *Me* and my friend.
Nie na bwana yako, *You* and your husband.

4. Possessive stems and demonstratives are invariable, with the form of the Swahili n-class, e.g.:—

kitabu yangu, my book.
muti ile, that tree.

[1] Harries, Lyndon, "Swahili in the Belgian Congo" TNR. No. 39.

5. No relative pronouns. "Ile" is used for all classes and numbers, e.g.:—

Kitabu ile nilinunua, The book I bought.
Mutu ile niliona, The person whom I saw.
Kiyana ile alibuba mudogo yangu, The youth who married my sister.

Note the following examples in which the antecedent is again referred to:—

Nguo ile wanapungusa naye muchafu, A cloth with which to wipe the dirt.
Mutu ile ninaweza kuikala karibu na ye hapana, There's no one near whom I can live.

Mwenye ile mubaya ndani yake, One in whom is evil.
Nyimbo ile munataka sie kuimba ye, A song which you'ld like us to sing.

6. The –na–, –li– and –ta– tenses are used as in standard Swahili. The –na– tense is also employed as a perfect tense in place of the –me– tense, which is never used, e.g.:—

Unakwisha tafuta babu? Have you looked for them?

The –ja– tense is not used, but "bado" followed by the infinitive is used instead, e.g.:—

Mutu bado kusema namie, Nobody has told me yet.

7. The verb "to be" is expressed by the invariable use of "iko", and, in the negative, of "haiko" or of "hapana", e.g.:—

Vitu yako iko muzuri, Your things are nice.
Nguo yabo haiko safi, Their clothes are not clean.

Note the use of "iko" with a verbal:—

Ye iko nakimbia mbio, He is running quickly.
Mie iko nakula sasa, I am eating now.

Note the meaning when the verb –wa (be) is used in the past tense as an auxiliary, not a very common usage:—

Walikuwa natembela nyuma, They *were* walking behind.

The idea of "to have" is expressed by "iko na, hapana na", e.g.:—

Mie iko na watoto tatu, I have three children.
Ye hapana na mwanamuke, He has no wife.
Franga hapana na babu, They have no money.
We ile iko na nyumba, You who have a house.

8. Monosyllabic verbals are treated as disyllabics in all forms, e.g.:—

kukuya, to come kukwenda, to go.

9. The prepositional form of the verb is not employed, but forms with "kwa", e.g.:—

Alipika chakula kwa ye, She cooked food for him.

The causative is in –isa.

10. The locative "ku" is preferred to the locative suffix –ni, e.g.:—

Aliingia kuchumba, He went into the room.
Aliingia kumungini, He went into the town.
Walikwenda kukisoma, They went to school.
Walitoka kumotokari, They got out of the car.

11. Temporal verbals do not employ the element –po–, e.g.:—

Wakati alikwenda, When he went.
Siku alisadiki, the day when he believed.
Saa nilisikia ile, When I heard that . . .
Fasi niliona, When I saw . . .

12. The words "mbele" and "nyuma" are used with time reference, not only with place reference, e.g.:—

Mbele ya kukwenda yetu, Before we went . . .
Nyuma ya kurudi yake, After his return.

The following constructions are of particular interest:—

With "hakose"

Alikwenda wapi? Hakose. Where did he go? I don't know.
Hakose bei yake iko ngapi, I don't know it's price.

With "paka"

Sukuma, yote paka pamoya, Push, all together!
Iko paka pembe ya nyama, It's just an animal's horn.

With "kana"

Kana walikwenda kana ilikuwa muzuri, If they had gone it would have been fine.

Kana aliyua daifu ya bibi yake, kana alifikili maneno ile mbele. If he knew his wife was unwell, he should have thought of this before.

Kana alitia ye ku fasi yake kana nani alikamata ye? If he had put it in its place, who would have taken it?

Franga njo hapana kana ninanunua, I've no money or I'ld buy it.

With "ao"

Siyui kwanza ao ku saa gani nitarudia ye, I don't know yet just when I'll return it.

Ao sasa anafikaga, ile mie hapana yua, Whether he is still coming, that I don't know.

Ao we iko wapi, Whether you are no matter where . . .

Ye iko napima sie, ao namna gani sie iko, He is testing us to see what we are like.

Ao siku ya kazi tatu, Perhaps on Wednesday.

Mie hapana mutu ile atatembela ao wapi, I'm not a person to go off anywhere.

Bwana yake iko mbio ao kupiga ye, His master is quick to hit him *for example.*

With "hata"

Sipendi yangu hata vita, For my part, I don't like war at all.
Ye hapana salimu hata mie, He doesn't even greet me.
Ye bado kwenda hata nae, He hasn't even taken it yet.
Mie hapana kula hata mie moya, I don't even eat by myself.

With "ile maneno"

Sikukamata bau ile maneno ilikunjama, I didn't take the board because it was warped.

Alifanya ile maneno ya nini? Why did he do that?

Note that "sababu" used initially denotes objection, e.g.:—

Nilisema nawe kufanya hivi.—Sababu nilikuwa nafanya hivi. I told you to do this.—(I couldn't) because I was doing this.

With "paka"

Kana unakatala kusadiki, paka utakwenda ku fasi ile, If you refuse to believe, you must go to that place.

Paka utamafisa kazi mbele ya kukwenda, You must finish the work before going.

With "angali"

Bambuti angali iko nakuya? Are the pygmies still coming?
Angali iko nakunya malofu, He is still drinking beer.
Ye angali ku biro? Is he still at the office?
Ye angali kwanza mbali, He is still a long way off.
Ye angali na kulala, He is still sleeping.

With "si"

Si njo? Isn't it? Si ye iko bwana yake? Isn't he her husband?
Si we utakupa mie nini? So then what will you give me?
Si utafanya nini leo? So what will you do today?

Note repetition of the verbal:

Anatupa kazi kutupa tu, He just works for no particular reason.
Semisi inafunga mie kufunga, This shirt really binds me.
Hapana simama, kwenda tu kukwenda, Don't stand, just get going.
Wanapanda miti kupanda? Do they actually plant trees?

Note use of wa- (any person):

Waite ye? Should he be called?
Watageusa motokari wapi? Where shall *we* turn the car?

Note also:

Kufika yangu ile, I've just arrived.
Kutoka yetu ile kuHoma, We've just come from Homa.
Kukwenda yangu yote ile, I'm going just right now.
Alikufaga, He really did die.
Unafanyaga kazi mubaya, You are working badly (habitual).
Nani anafungaga mulango? Who keeps shutting the door?
Pali munaikala, Where you sit.
Fasi wanataka, Where (ever) they want.
Sema haki yake sasaa ye iko, Tell it as it is.
Sasaa ninayua ye iko kwabo, So far as I know, he's at home.
Siyui sasaa ye iko kule, I don't know that he's there.
Babu wenye wanayua sawasawa wanafuatana, They themselves know how they succeed one another.
Ye iko mwanamuke ya watu, She is married.
Ile hapana ya mutu, That belongs to no one.
Ile iko mali ya watu, That belongs to someone.

A common greeting is "We iko?" How are you? In reply to "Habari gani?" one often hears "Habari hapana". A very common negative reply, meaning No, is "Wapi".

UKARA ISLAND

By R. L. Paterson

[The agricultural information in this article is largely based on the article written by Messrs. Rounce and Thornton which appears in *Tanganyika Notes and Records* No. 1. I am also indebted to Dr. H. Trant for extracts from several reports published in the E.A. Medical Survey Annual Reports listed at the end of the article.]

In the south-east corner of Lake Victoria and in the District of Ukerewe lies the small island of Ukara which has for many years attracted great interest on account of the intensive system of agriculture evolved by its people whereby a population of over 550 persons to the square mile of its total area are supported at a standard of living not lower than that of most African tribes.

PHYSICAL

The island has a total area of approximately twenty-nine square miles and is roughly square in shape, the northern and eastern parts being broken up by a series of rocky hills and granitic outcrops which reduce the actual area suitable for cultivation to some twenty square miles.

The main soils are composed of weathered granite and vary in texture from medium loam to almost pure sand.

Rainfall varies between sixty and seventy inches per annum but is more evenly distributed and more regular than that on the neighbouring island of Ukerewe.

HISTORICAL

The inhabitants, usually referred to as Bakara, are by origin an admixture of various tribes and refer to themselves as Baregi and to their island as Buregi.

According to local tradition the original inhabitants were a clan called the Basimba who lived in the area of Busere on the south-east of the island, but it is not known what language they spoke and there are none of their descendants surviving today.

These original inhabitants were joined by settlers from the area of the Kavirondo Gulf called Barabi, Balega or Banja, who settled in the north of the island on the shores of Bukiko harbour. They are said to have arrived on a floating island of papyrus. These settlers referred to the original inhabitants as "bantu ba kala (or kara), i.e. "men of old" (cf. Swahili "kale") and thereby gave rise to the misnomer "Bakara".

Following the Kavirondo settlers came others from the Baruri of Musoma, who were referred to as Baindi.

These in turn were followed by the Basita from Sukumaland and the Banga from the mainland area of Ukerewe, and finally came the immigrants from the west side of the Lake.

These last were of Hima stock and arrived in Ukara at about the same time as other immigrants from the Bukoba area arrived in Ukerewe.

This is known with reasonable accuracy to be about the time of the reign of Ruhinda in Bukoba, *circa* 1570.

The various clans appear to have lived together amicably and to have acquired a high population density several centuries ago.

The reasons for this density of population, according to the Kara elders, were, firstly, that the water barrier round the island and absence of wild animals made

Ukara a safe place in which to live and, secondly, that the absence of a chief with his demands upon the population made Ukara a popular place in which to settle.

There is no doubt that in pre-European times these were very valid reasons for the island being heavily populated, and it is of interest that the Kara had no chief or village headmen until the coming of the Germans, the sole unit of authority being the head of the family.

When the Germans arrived in Ukerewe, Matete the son of Mabayi, a prominent person, advised the islanders to make overtures of friendship to the "red" men but his advice was not heeded. A year later in 1900 the Germans landed an armed party at Bukungu and held a meeting at Katende at which the Kara agreed to fall into line with other tribes and elect a ruler and spokesman to deal with them.

Matete, the father of the present chief Mataba, was elected, recognized by the German Government and ordered to place headmen in charge of the villages.

A Sukuma, Kisaganye, was appointed Katikiro but after two years was imprisoned by the German Government for malpractices. He was replaced by Musiba s/o Rutaba, afterwards Chief of Bugando in Geita District, who held office until replaced by Mataba shortly before the 1914-18 war.

At the same time as a Chief was imposed upon the islanders the German Government also levied a tax, of which three per cent was remitted to the chief and headmen. A mild form of tribute consisting of a few days work for the chief and headmen was also instituted.

Prior to this no tribute customs had existed.

DAILY LIFE

Though the language spoken in Ukara is Kijita, an East Lake language, the typical Kara hut bears a strong resemblance to the thatched bee-hive shaped huts of Bukoba, the conical central point being, however, more pronounced than in the Haya type.

A Kara Hut.

These houses are built in groups varying from three to twenty-five, and averaging ten. The doors and internal partitions are made from hand-hewn planks often of remarkable width, and the division of the house between humans and stock is similar to that of the Haya, the cattle being tethered in the stone-lined pits described later in the section on Agriculture.

Grain and cassava are usually stored in the house in large woven baskets (*bifuma*) principally to guard against theft, though in recent years many people have started to store food outside the house in woven food bins (*bitara*).

It will be appreciated that with a population so dense, life amongst the Wakara is a never-ending struggle to get food, and of the few criminal cases heard in the Chief's court, most concern theft of crops and assaults arising from disputes over land. As a precaution against theft, cassava roots when laid out to dry are arranged on a flat rock in regular rows within a border of small stones so that the loss of even one root is immediately noticeable.

The main foodcrops are bulrush millet, cassava, red sorghum, finger millet, Bambarra groundnuts, sweet potatoes and a variety of wild and cultivated green vegetables. Rice is extensively grown in the swampy areas but is regarded purely as a cash crop. Small quantities of maize, yams and simsim are occasionally grown. There are very few fruits grown on Ukara and signs of vitamin C deficiency are frequently noted.

Meat, fish, fowls and eggs are the chief source of proteins the two latter being forbidden to adult women but not to small girls. Fish of all types are eaten, but *Kambare mamba* (*Protopterus aethiopicus*) and *Nghuyu* (*Barbus radcliffi*) are forbidden to all women, whilst *Mbete* (*Mormyrus kannune*) is forbidden only to the women of Bubanja, Bukiko, Busere and Kome villages.

Meat in the form of beef is chiefly eaten in the months of July or August at the end of the agricultural cycle when surplus stock is slaughtered to preserve the correct stocking density.

Goats are rarely eaten except when killed as a sacrifice in case of illness. In such cases they are strangled and not slaughtered. Their meat is taboo to the women of the same villages noted above in which the eating of *Mormyrus* is forbidden.

Lake flies, grasshoppers and white ants are also eaten.

Salt used in pre-German times was a potassium salt prepared from the ashes of reeds (*lubimbiri*) and filtered through a small earthen bowl with five holes in the bottom. The resulting solution was evaporated until a salty deposit was obtained. Nowadays sodium salt is usually bought, but potassium salt is still prepared and preferred for flavouring green vegetables.

As life consists of dawn to dusk work in the fields, diversions are few, but beer drinks attended by up to 400 persons are frequently held after the harvest, also bull fighting in which bulls are matched against each other.

No betting takes place at these bull-fights but they are a source of great prestige for the owner of the winning bull, and for this reason bulls are given the best food and present magnificent figures compared with the scrubby undernourished cows which average only 450 to 500 lb. liveweight.

In spite of the hard struggle to live the Kara are generally healthy and a recent medical survey describes them as having height and weight ratios amongst the best in Africa. They are not unduly concerned with the absence of medical facilities and have a variety of local treatments which appear to be effective.

Deep wounds are treated with the chewed-up leaves of a particular tree and sores are often covered with an effective adherent dressing obtained from the thick membranes manufactured by a species of spider.

Hydroceles and abscesses are tapped swiftly and painlessly with a hot iron by various persons skilled in this art.

Of great interest is a "doctor" whose skill in the treatment of insanity has been handed down from father to son and whose reputation is widespread outside Ukara. The treatment consists of a two to six months course of a medicine prepared from the leaves of a tree.

There exists at Nyamaruru village in Mubule *gunguli* a knife of unknown age, similar to a bush knife, which is kept in a small hut guarded by a nearby family, and is used for a type of trial by ordeal.

The disputing parties sit on the knife, which is fixed at an acute angle, and slide down it. The party wounded in this exercise is adjudged to be the loser in the dispute.

AGRICULTURE

The high standard of agricultural practice in Ukara is due to the needs of a dense population living on poor soil.

The 1948 census figures showed:—

	Males	Females	Totals
Adults	4,345	4,727	9,072
Children	3,772	3,657	7,429
			16,501

This gives an overall figure of 569 persons to the square mile but as only 2 acres are cultivated by each adult male annually, only 13½ square miles is really suitable for cultivation, giving a population per square mile of the arable land of over 1,220.

There are also 9,892 cattle and 4,833 small stock, totalling 10,850 grazing units which are supported on the remaining 15·5 square miles of the island, i.e. at a density of 0·9 acres per grazing unit.

One of the chief factors in encouraging good farming is that land is individually owned and may be sold or bequeathed at the will of the owner.

The main principles in the farming system are:

(a) The stall-feeding and housing of stock.

(b) The making of farmyard manure by supplying bedding to the stock.

(c) The growing of forage crops, including trees, for the stock.

(d) The growing and digging in of green manure.

(e) The rotation of crops.

Cattle and small stock are tethered in their owners' houses in pits, large for cattle and correspondingly smaller for goats.

The pits are some four feet deep and are lined with stone to prevent the edges from crumbling. Fodder and bedding are brought in twice daily and when the bedding and dung has accumulated to the level of the floor, or even higher, it is taken out and heaped. This has the same action as turning a compost heap and after further decomposition the manure is ready for the land.

The fodder used comprises both cultivated stock feed and crop refuse.

The former consists of four types of grasses:—

(1) *Mabimbiri, Vossia cuspidata.*

(2) *Bunyambe, Echinochloa sp. near E. Stagnina.*

(3) *Mabingo, Pennisetum purpureum.*

(4) *Matete, Phragmites mauritianus.*

These are grown in special pits, dug near the Lake or by the side of rivers, known as *imara*, in which the water level is constant.

"Imara" in course of construction. The pit will be flooded and fodder grasses planted therein. Note river bank in background raised above level of surrounding land.

With these too may be classed the leaves of thirty-two species of trees, since trees on the island are planted, preserved and owned as are other crops. The leafy branches of these trees are lopped and carried in to the stock for both fodder and bedding, and the lopping over a period of years has given the trees a peculiar umbrella-shaped appearance. There also may be classed as a cultivated stock feed *Crotalaria striata* which is, however, principally grown as a green manure and will be mentioned later.

Crop refuse fed to cattle consists of:—

1. Stalks of sorghum, bulrush millet and rice.
2. Haulms of Bambarra groundnuts.
3. Dried leaves of sorghum.
4. Leaves and stems of cassava and sweet potatoes.
5. All weed growth.

The bulls are almost entirely stall fed and usually leave the huts only for watering and for bull-fights which are the principal Kara diversion.

Cows are often grazed for some part of the day in the arable areas and after the rains are grazed on the pasture lands in the centre of the island where there exists an almost pure stand of the grass species, *Trichopteryx uagerensis*, which is first hand-pulled for thatch.

Handpulling thatching grass. The aftermath is grazed by stock.

All stock are muzzled on their way to water with basket-work muzzles to prevent damage to crops.

A bull wearing a muzzle.

The manure produced by this system of stall feeding, after decomposition outside the house, is laid out in heaps on the holdings in the dry months of June, July and August when the soil is powdery, and is dug in soon after, before it can become desiccated.

A minimum of three tons of manure per stock unit per annum is produced and since the average number of stock units per adult male is nearly two and a half, at least 7 tons of manure can be applied on the average holding of two acres.

This however does not appear to be sufficient for continuous cropping and the Kara also make use of green manure in the shape of two indigenous leguminous crops namely *Crotalaria striata* and *Tephrosia erecta*. Both are called *Malegeya* in Kara but the latter is rarely planted pure and is of less importance.

The usual practice is for both species to be interplanted with bulrush millet when it is about one foot high. Both species are slow-growing and reach a height of four to five feet at eight to nine months old when they are dug in. Both have strong tap roots which bear a large number of bacterial nodules and the protection afforded by the strong vegetative growth and heavy leaf fall preserves the soil moisture and prevents erosion.

In comparing the indigenous species used by the Kara with *Crotalaria juncea* sometimes used in the tropics as a green manure, it must be realized that the indigenous species at first makes very slow growth and allows any crop in which it is interplanted to develop normally and at the end of the season will produce up to nine tons of green matter per acre, whereas the latter is more often used as a catch crop.

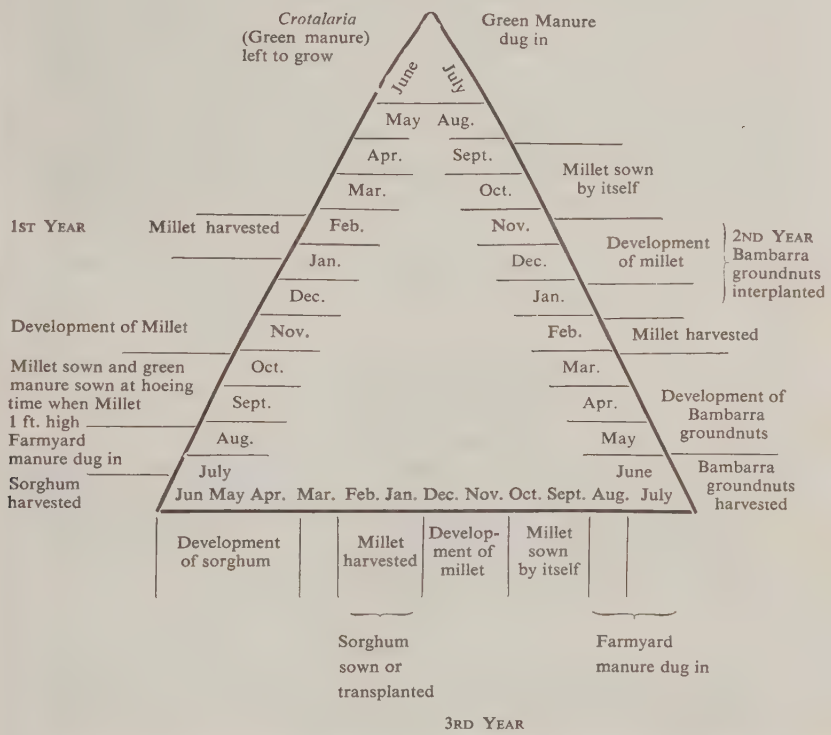
It used to be considered that a green manure was most advantageously dug in when the soil was moist, but it is an interesting fact that the Kara dig in their *Crotalaria* in a woody mature fibrous stage in the dry season, and plant their crop on that land at the first rains, as is now the practice in Southern Rhodesia on European estates.

One other method of manuring not previously recorded consists of strewing small leafy branches of *miebe* trees (not yet indentified) on the shamba and digging them in when dry. This is said to produce results equal to the use of *Crotalaria*.

Rotation of crops follows a three-course rotation.

THE 3-COURSE ROTATION OF THE WAKARA

(Main Crop Millet)



The main crop is bulrush millet and all available land is planted with it at the beginning of the season. Areas to be planted receive an application of green manure or farmyard manure which is dug in before the crop is sown.

The crop following varies but if the millet has been sown by itself a second sowing may be made. This is only done when it is known that there will be sufficient farmyard manure to dress the area in the next season, since the slow growth of the *Crotalaria* precludes a second planting whilst it is growing.

The second most important crop is Bambarra groundnuts which are interplanted with the millet just prior to the setting of the seed. When the millet is ripe, it is harvested and the stalks are removed, allowing the Bambarra groundnuts to develop. If Bambarra groundnuts are not required a sorghum crop often follows the millet, particularly when the previous crop was given a dressing of farmyard manure.

The other general crop is cassava. This is not treated primarily as a foodcrop but is regarded as a reserve, and is invariably interplanted in the growing millet. It is given a very wide spacing and attains its full development when the millet is removed.

If the land has been well manured with either green or farmyard manure, Bambarra groundnuts are also planted with the cassava so that the land carries three crops in one season.

In order to be sure of a permanent supply of planting material, hedges of cassava are planted near the homestead.

Sweet potatoes are usually planted in damp sandy soils near the lake but are occasionally seen in small patches following the millet crop in the fields.

Owing to the sandy nature of the soil and the intensive cultivation, anti-erosion measures are most necessary, and with varying degrees of success the following methods are followed:—

(a) Tie-ridging or pitting.

(b) Terracing without stones.

(c) Stone-walled terraces.

(d) Ridges used as paths between holdings.

(e) Earth banks across water courses.

(f) Fences of *Phragmites* planted in gullies.

(g) Banking up the sides to streams of prevent the widening of the stream bed. This practice has led to the raising of the stream beds above the level of the surrounding land (see Fig. 1) and a good example of this may be seen at Chigara on the south-east, where the previous courses of the banked-up river before they burst the banks may be seen.

SOURCES

N. V. Rounce and D. Thornton. "Ukara Island and the Agricultural Practices of the Wakara". (Government Printer, Nairobi).

East African Medical Survey Annual Report 1951.

East African Medical Survey Annual Report 1952.

East African Medical Survey Annual Report 1953.

Mwanza District Book.

Tanganyika Notes and Records No. 1 March, 1936.

Correspondence

TABORA EMERGENCY COINAGE

SIR,

This coinage never seems to be given the respect which is its due: It is I think the very last in the long and respectable tradition of siege coinages—surely the most romantic department of numismatics. Perhaps for the last time in history a wartime military administration with such makeshift materials and equipment as came to its hand, actually struck a coinage, instead of resorting purely to the printing press (it did print notes of course as well). Do we stop as often as we might to remember the long series in which it comes a very respectable last? Behind it lies the sovereign size gold pounds, punched out during the South African war, which had no pattern whatsoever struck on them, and the siege pieces struck during the Civil War of 1642 which were simply clipped out of silver plate and roughly marked with their denomination on a blacksmith's anvil.

By their very nature, sieges often being successful and the records of the vanquished destroyed—even if kept when "in extremis"—little is ever known about these emergency mintings, and the Tabora operations are no exception although they took place a bare forty years ago. There are traditions of course—that brass cartridge cases and copper boiler pipes from the *Emden* were melted down, that Sekenke gold was used and that a submarine brought the dies for the "sovereign" from Germany. But is there any published record of what volume of each denomination was struck, how widely it was circulated, and how readily accepted? Were the copper and brass heller redeemed? Were they more or less popular than the printed notes, and perhaps at a discount compared with the regular, pre-war issues? Did the German forces continue to use them right up to the end of the war in 1918?

A fly on the wall of a Western Province cash office must have had some tales to tell of the immediate post-war period. Belgian, British and German coinages; the Tabora issues, not to speak of the IOU's, and emergency printed notes faith, or hope, in which must have been some time a-dying. The subsequent change from florin—of a hundred white metal cents to a shilling only slightly smaller and also of a hundred, but bronze, cents was also, I believe, a considerable matter.

As a postscript I would like to record a view of mine about the Tabora "sovereign". It is sometimes said, in support of the theory that the dies came from Europe by submarine, that the workmanship is far too fine to have been that of a Tabora engraver. But are we not perhaps denying due credit to some local craftsman? The design has always struck me as being a good effort, if locally produced, but a very poor one if it came from Germany. Sent out by submarine one would have expected, if not the dies of the pre-war gold piece, then at least something propagandist to remind those using the coin of the empire which struck it. The fine die would not necessarily perhaps have served for make-shift striking. But, if so, an alternative version of the Emperor William's likeness could easily have been produced. A local craftsman, on the other hand, might well have boggled at risking his hand at an imperial portrait, and with reason have turned instead to the remarkably peaceful looking elephant which in fact we see.

Yours faithfully,

D. D. YONGE

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RECENT LANDSLIDE PHENOMENA IN THE RUNGWE VOLCANIC AREA, TANGANYIKA

By E. G. Haldemann, Dr. phil., F.G.S.

Editorial Note: The following article is the text of a paper presented at the XXth International Geological Congress, Mexico, in September, 1956.

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RECENT LANDSLIDE PHENOMENA IN THE RUNGWE VOLCANIC AREA, TANGANYIKA

General Information

1. During the night of 9/10th April, 1955, a catastrophic amount of 17 inches of rain caused a large number of landslide phenomena near Tukuyu, on the southern slopes of Rungwe. Since the Rungwe District is densely populated (over 130 people per square mile), considerable damage was done to cultivated land and several people were killed. On the 5th May, 4·85 inches of rain caused further damage and a big landslide of a composite nature which temporarily blocked the Mbaka River.

2. On the average, the annual precipitation of 100 inches in the Tukuyu Area is spread over 160 days of rain. There are considerable variations in the precipitation. In 1943, a minimum annual rainfall of 71·22 inches and in 1945, an annual maximum of 130·77 inches was measured at Tukuyu, where records have been kept since 1918. Although a 24 hours' maximum of 12·65 inches of rain was reported on the 21st November, 1941, the local natives (Nyakyusa) maintain that the last freak storm of a similar magnitude to the one of the 9/10th April, 1955, fell in 1912. Unfortunately, this information cannot be checked with German records, since the meteorological station Neu Langenburg (Tukuyu) was given up in 1912 (cf. Heidke, 1914, p. 85). There are a good number of rainfall gauges in the Rungwe District, but unfortunately, the area between the line Rungwe Mission-Tukuyu-Musekera-Mwitika and Manow Mission, i.e. the area of greatest concentration of the recent landslide phenomena, is not covered. It would seem advisable to establish a gauge at Masoko Dispensary or at Itagata School.

3. The area which was most affected by the landslide phenomena is situated between the valleys of the Mwalesi[1] and Mbaka rivers south of Itagata, at altitudes ranging from 4,000 to 5,000 feet. This area lies within the Upper Grassland Belt of the Nyakyusa south of the Rungwe Forest and north of the Woodland Zone (altitude 2,000 to about 4,000 feet). Some mass-movements were reported from the Iloto Area of the Suma Valley and others were noted in the Musekera Valley. The various localities are shown on Map G.S. 970 the topography of which is based on Preliminary Plots (without contours) Nos. 259/I-IV. The above-mentioned Upper Grassland Belt was created by the Nyakyusa within the last eighty-odd years by deforestation (cf. Plate IV). The absence of the forest cover is one of the passive causes favouring landslide phenomena and will be discussed below (paragraphs 24 and 28).

4. Although there is evidence in many parts of the Rungwe District that mass-movements have occurred in the past, they have escaped official notice because they have apparently passed without causing much damage or loss of life. The recent events, however, were of such a magnitude that the Provincial Administration asked for technical advice. Mr. F. M. Coster, until recently Engineering Geologist of the Department of Water Development and Irrigation, briefly inspected the Itagata Area on the 20th May. He recommended in his report "that a detailed geological survey should be made of the area to assess the size and number of all landslides and washaways" and that new air photographs should be

[1] Locality names are spelt according to the Survey Department's usage. The correct Nyakyusa pronunciation for Mwalesi is Mwa*lisi* (lw*isi*—river; nyisi—rivers).

taken. On consideration of the technical aspects involved it was suggested by the Department of Geological Survey that further investigations should be carried out by a team of technical and administrative officers rather than by a geologist alone. On the 22nd August, 1955, when the writer arrived at Tukuyu, Mr. C. A. WALDRON, Agricultural Officer (Soil Conservation), had just finished his two weeks' investigations in the Rungwe District. WALDRON's report discussing various aspects of soil conservation and the practicability of precautionary measures was distributed in September, 1955. A joint visit to the Itagata Area was made with Mr. WALDRON on the 23rd August. During this first inspection and the following four days of field work, the writer was kindly assisted by the District Agricultural staff and local natives and he especially wishes to express his gratitude to Messrs C. A. WALDRON, J. W. PACKARD, Field Officer, THOMAS M. MWAMBINGU(2), Senior Agricultural Instructor, and IKUNGETA MWAMBAJA, Geological Field Assistant (retired) for their kind and active co-operation.

GEOLOGICAL ASPECTS

5. The greater portion of the area under consideration is covered by the Rungwe Volcanics which are blanketing Pre-Cambrian gneisses and Karroo and Cretaceous formations of the Nyasa-Rukwa Trough. D. A. HARKIN (1954) recently mapped the Rungwe Volcanics and describes them as a group of lavas and tuffs of late Tertiary to Recent age. The volcanic rocks are associated with four main centres of eruption, namely Katete, Tukuyu, Rungwe and Kiejo (order of their relative age; cf. HARKIN, 1954, p. 1). The present-day topography is invariably governed by the direction of the lava flows around these centres. Each of the volcanic centres got its characteristic suite of basaltic, phonolitic or trachitic lavas, but, with the exception of the Sarabwe lava flow (HARKIN, 1956), they are all in part masked by pumice tuff of the last eruption of Rungwe.(3)

6. As a rule, the soil profile consists of the following distinct layers:—

I. Black-brownish humus rich top soil.
II. Light coloured, very porous pumice tuff.
III. Clayey, reddish ash bed.

The sub-surface is represented by lava; some of the older basaltic lavas have a clayey weathered top-zone.

The top soil is usually two to four feet thick. The pumice tuff and the ash bed vary considerably in thickness. At Kipasa (Pt. B), the pumice tuff is six feet thick; on the road to Mwakaleli in the upper Suma Valley it was found to be up to twelve feet thick, while on the road to Masoko it was noted to disappear north of the bridge over the Mwalesi River. Pumice tuff layers alternating with black-brownish soil were observed by BEHREND (in LEHMANN, 1924, p. 13) in a well shaft sunk in the courtyard of Tukuyu Boma. Twenty-two feet of volcanic ash were measured below the pumice tuff layer at Pt. C near Kipasa and thirty-eight feet at Pt. D in the Mwalesi Valley (PLATE V). The approximate southern boundary of the pumice tuff is shown on Map G.S. 970.

7. It is apparent that the thick soil profile in a broken hilly country barren of its natural forest or wood cover and receiving a high amount of rainfall is extremely unstable.

(2) THOMAS MWAIPOPO MWAMBINGU died at Tukuyu on the 8th February, 1956.

(3) The approximate age is given by HARKIN as of the order of a few hundred years. The Sarabwe lava flow of Kiejo is dated as approximately 1800 A.D.

[*Photo: E. G. Haldemann*

Valley about 450 yards south-east of Itagata Court-house. Scar of old debris-avalanche, now overgrown and partly cultivated and showing slumping effects at its head, is well seen. Mass-movements during the recent catastrophic rain were restricted to small slips and washaways. It is significant that the old debris avalanche was not re-activated.

[*Photo: E. G. Haldemann*

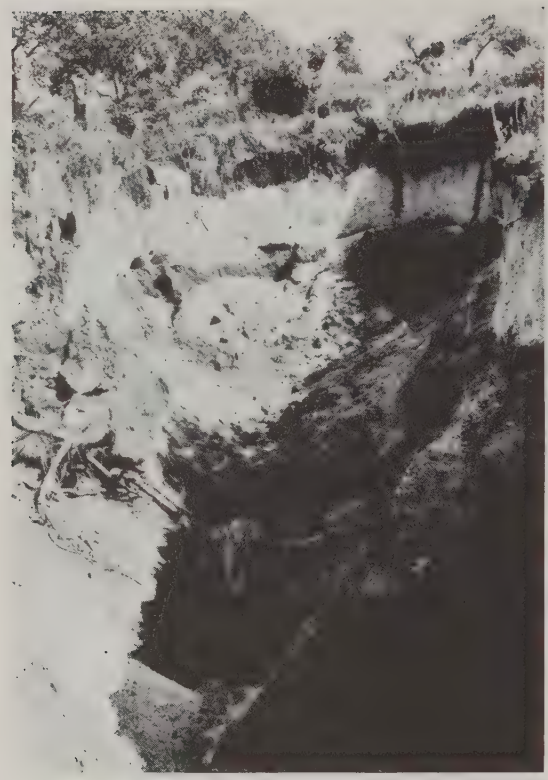
Small valley in the Rufumbi area draining towards the Mbaka River. The typical "matuta" cultivation was practically not affected by landslide phenomena although the area is potentially vulnerable and the "matuta" may in fact provoke slumping.

[*Photo: E. G. Haldemann*

Debris-avalanche of pa-Kiwale (Pt. A) which came down during the heavy rain on the 9th April, 1955, destroying two houses and causing considerable damage to a banana and coffee "shamba". The movement started within the thick pumice subsoil and the mass slipped on the underlying weathered basalt. The slope of the upper portion is 27 degrees but in the lower portion of the debris-avalanche it flattens to 8 degrees. A smaller debris-avalanche 300 yards to the left destroyed a house and killed two people.

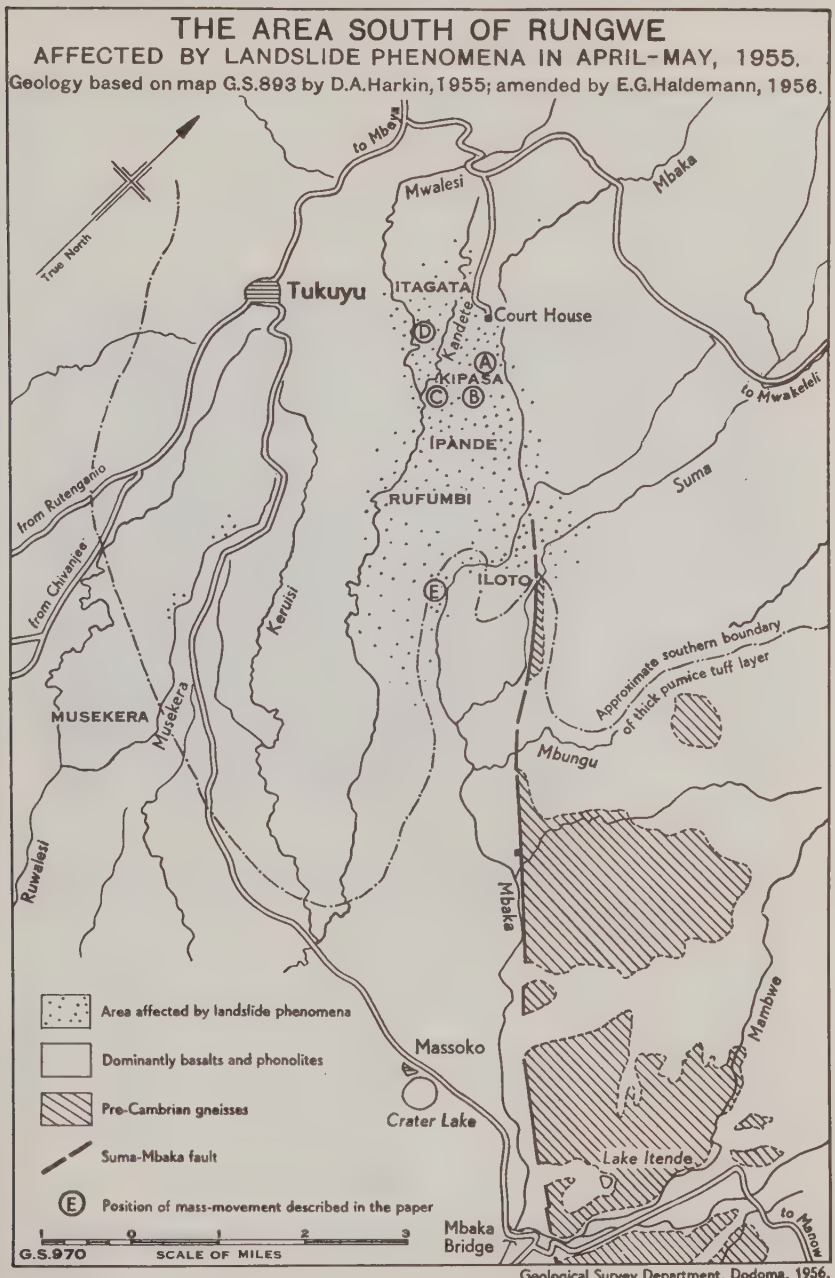
[*Photo: E. G. Haldemann*

A case of re-activation of an old debris-avalanche in the Kipasa area (between Pts. B and C). The catastrophic rain caused slippage within the pumice and volcanic ash subsoil at the head of the old debris-avalanche, thus initiating a new one which destroyed a cassava and a maize "shamba".



[*Photo: E. G. Haldemann*

The upper end of the gully formed by a flow slide caused by liquefaction of the volcanic soil profile at Kipasa (Pt. B). The dark, humus-rich topsoil is underlain by the layer of light, very porous pumice which in turn is underlain by volcanic ash. The figure stands on impervious and clayey, weathered basalt on which the mass slipped or flowed.



Geological Survey Department, Dodoma, 1956.

Types of Mass-Movements

General Considerations

8. The term mass-movements embraces all landslides and related phenomena ranging from soil-creep to rock-slides and rockfalls. For the understanding of the following description of the recent landslide phenomena in the Rungwe District, a brief review may be given of the general classification of mass-movements which was developed by Sharpe (1938). By approaching the problem from a geological point of view, Sharpe demonstrated that of the wide variety of factors involved, the following three provide the most suitable basis of classification:—

(a) The kind of movement (slide or flow) and its relative rate (slow or rapid movement).

(b) The relative water or ice content of the moving mass represented by the gradation: Ice—ice plus earth or rock—earth or rock—earth or rock plus water—water.

(c) The kind of material involved.

9. The distinction between the two principal kinds of mass-movements, slides and flows, depends on the presence or absence of a slip plane separating the moving mass from the stable ground. In flowage of any type, no slip plane is present and movement takes place by continuous deformation of the mass. True slides on the other hand move on a slip surface. As in the case of most natural phenomena, no absolutely sharp boundaries can be drawn between groups. In some flows, initial movement may start with slippage; in some slides, the initial sliding or falling may develop into a flowing motion. The major types are, therefore, divided according to their predominant characteristic. Sharpe classified mass-movements into four major groups. By emphasizing the points with a bearing on the phenomena observed in the Rungwe District, these groups can be described as follows:—

I. *Slow flowage:* It includes creep and solifluction. This movement is generally so slow as to be imperceptible, unless the observations are extended over a long period. The water content may vary, but usually it is relatively low. Trees with curved trunks concave upslope were noted in the Itagata Area. The trees tilted downslope by soil-creep tend to return to vertical position during growth (positive heliotropism).

II. *Rapid flowage:* In the order of increasing water content the types involved are debris-avalanches, earthflows, liquefaction flows, mudflows and slopewash or washaways. Rapid movement is facilitated with the increased water content after heavy rains. The extreme is reached in fluvial transportation, where water is much in excess of the amount required to overcome the internal resistance of the mass. The debris-avalanche is the dominant type in the Rungwe District. The initial movement of a debris-avalanche is caused by slippage either on an underlying rock surface or within loosened debris (cf. slumps).

III. *Landslides proper*[4]*:* It is defined by Sharpe (1938, p. 64) as a

[4] The term "landslide" is commonly used for all the phenomena mentioned in groups II and III. It will appear from the general consideration of the subject that in the present report, the term is used only in the strict sense of Sharpe's classification.

[*Photo: E. G. Haldemann*

The lower part of the gully caused by the flow slide at Kipasa. 25,000 cubic feet of liquefied soil and subsoil passed through the four-foot high tunnel fourteen feet below the surface. The tunnel was formed by the widening of an existing underground channel. This uncommon type of mass movement is compared with the flowing of a thick liquid out of a bottle and is termed "bottle flow".

[*Photo: E. G. Haldemann*

The Kipasa Area south of Itagata as seen from the Mbaka-Mwalesi watershed looking westwards. Tukuyu is visible in the upper left-hand corner. Two small debris-avalanches destroyed a considerable portion of the "shamba" on the left-hand side. Point B indicates the position of the Kipasa "bottle flow". Note that all the slides occur along natural drainage lines.

[*Photo: E. G. Haldemann*

Debris-avalanche which flowed into the Mwalesi River below the Mwalesi-Kandete confluence near Kipasa (Pt. C). Twenty-six feet of volcanic soil and subsoil are now exposed at the steep upper end. Note the mudflow-like appearance at the lower end or tongue of the debris avalanche; the lower part of the mass flowed in a manner similar to a mudflow on account of its high water content.

"perceptible downward sliding or falling of a relatively dry mass of earth, rock, or mixture of the two". Landslides can be divided into the following types: Slump, debris-slide, debris-fall, rockslide and rockfall. Slumping effects were noted in various places in the Rungwe District. A slump is the downward slipping of a mass which moves as a unit or several subsidiary units with backward rotation, whereby the slip surface becomes spoon-shaped or concave towards the moved mass.

IV. *Subsidence:* This phenomenon as observed in the Itagata Area is a movement in which there is no free side and surface material is displaced vertically downward with no visible effect of a horizontal component.

The recent debris-avalanches in the Rungwe Area

10. The debris-avalanche of pa-Kiwale (Pt. A) started to move within the thick pumice tuff and volcanic ash sub-soil. The mass then slipped on the underlying weathered basalt 200 feet downhill before it started to flow along a stream channel. Bamboo, scrub and small trees in the upper region did not prevent the initial movement. The region of deposition, where the debris-avalanche came to a rest, was a banana and coffee "shamba"(5) which was partly destroyed. Immediately to the east of this debris-avalanche which is shown on Photo No. 4/42, PLATE II, there were two smaller debris-avalanches; they buried two houses in one of which two people were killed on the 9th April, 1955.

11. The typical debris-avalanche which went down into the Mwalesi River at Pt. C just below its confluence with the Kandete River is shown on Photo No. 23/42, PLATE V. The upper region of this debris-avalanche exhibits a spoon shaped or concave slip surface which indicates that the initial movement was caused by slumping. The concave slip surface lies within the volcanic ash bed, except for the lowermost portion in which weathered basalt is exposed. The middle section is comparatively long and narrow and its slope is 10 degrees or even less. The pictures show very well that the mass no longer moved as a unit but was completely deformed in a turbulent flowing motion. At the lower end or tongue of this debris-avalanche, the mass attained a mudflow-like character. Some debris were noted on the opposite valley side. It was observed that the pumice tuff layer which is up to four feet thick on the east side, is partly absent on the west side of the debris-avalanche. The obvious explanation is that the pumice tuff on the west side had moved down in the past. The hut in which three lives were lost was situated on the drainage line followed by the debris-avalanche. Further damage to the banana, coffee and maize "shambas" was done by washaways and erosion of the coverless soil by rains after the down-going of the avalanche.

12. A debris-avalanche approximately 300 yards long was seen between Pt. A and Pt. C in a small valley draining towards the Kandete River. After an initial slip over clayey weathered basalt on a slope of 10 degrees, the mass flowed over a bulge formed by hard basaltic rocks below which the mass was deposited. The thickness of the exposed pumice tuff and volcanic ash layers at the upper end of this debris-avalanche was forty feet.

(5) "Shamba" in Swahili means a plantation or a plot of cultivated ground.

13. Half a dozen noteworthy landslide phenomena occurred in the Mwalesi Valley above its confluence with the Kandete. They all ended in the Mwalesi River and appear to have been caused, at least in parts, by undercutting of the river banks. Some are not debris-avalanches proper but border cases between slumps, debris-slides and debris-avalanches. A debris-avalanche was found at Pt. D in the Mwalesi Valley. Photo No. 24/42, PLATE V, shows the steep upper end from which the mass of this debris-avalanche separated.

14. A typical debris-avalanche produces a conspicuous scar on a hillside. Many scars of old debris-avalanches can be seen in the area south of Rungwe and they could easily be detected on low level air photographs. Photo No. 0/42, PLATE I, illustrates the character of an old debris-avalanche site now covered by grass, crop and secondary scrub in its upper region near Itagata Court-House. The fact that this old debris-avalanche was not re-activated can be explained by the comparatively low slope angle and the existence of underground channels which act as a natural drainage. Picture No. 22/42, PLATE II, demonstrates a case of re-activation of an old debris-avalanche in the Kipasa Area. The slope angles at the head and on the sides parallel to the track of the old debris-avalanche were too steep and the grass and secondary scrub could not prevent further movement of the unstable soil profile.

The liquefaction flow ("bottle flow") of Kipasa and cases of subsidence

15. At Pt. B, Kipasa, a flow slide phenomenon produced a gully with the following dimensions:—

	Feet
Length	100
Width at upper end	34
Width at lower end	30
Depth at upper end	14
Depth at lower end	18

Twenty-five thousand cubic feet of soil from this gully passed through a tunnel at the lower end with a diameter of four feet (cf. PLATE III). Where this tunnel opens into a stream channel thirty feet lower down, it is only just over two feet in diameter. The tunnel was formed by the widening of an existing underground channel on the clayey surface of the weathered basalt below the soil profile. The presence of underground channels is indicated by several springs in the area.

16. The following explanation of the liquefaction flow of Kipasa, based on field observations, is offered. The excessive amount of water percolating through four feet of top soil and the six feet thick pumice tuff saturated the underlying volcanic ash bed to such an extent as to cause it partly to liquefy and to flow through, and at the same time to widen, the existing underground channel. The existing drainage within the volcanic sub-soil and the increased weight of the overlying saturated material and surface water were presumably the two important factors which caused the phenomenon. The overlying pumice tuff and top soil near the lower end then subsided. After the first portion of the soil profile had collapsed and flowed through the tunnel, slumping developed at the head of the

flow and one block of the soil profile after the other slipped down and flowed through the tunnel. A spoon-shaped slip surface of a slump was noted at the upper end of the gully thus produced (cf. Photo No. 6/42, PLATE III). This peculiar phenomenon can be compared with the flowing of a thick liquid out of a bottle and is therefore termed "bottle flow".

17. A case of subsidence found in a "shamba" about 800 yards south of Itagata Court-House is shown on Photo No. 19/42, PLATE VI. A hole, four by five feet wide and about six feet deep, was produced by subsidence in a "shamba" above the small valley in the vulnerable Rufumbi Area (cf. Photo No. 10/42, PLATE I). The conditions in the Rufumbi Area are very similar to the ones encountered at Kipasa. The observed cases of subsidence are the result of the removal of volcanic ash sub-soil through the existing underground channels and of compaction within the soil profile. There is thus an obvious genetical relationship between these phenomena and the Kipasa "bottle flow".

The major landslide in the Mbaka Valley

18. The major landslide was related to the 4·85 inches rainfall on the 5th May, 1955. According to eye-witnesses it took place between 11 a.m. and noon. This landslide is situated in an uninhabited stretch of the Mbaka Valley about four miles east of Tukuyu and is marked on Map G.S. 970 as Pt. E. The slope involved is grass-covered and there is no cultivated land in the catchment area. The slope angles range from 18 degrees to over 30 degrees. The pumice tuff is practically absent and the fresh section exhibits a thick volcanic ash bed over well-jointed hard tuff and basalt (cf. PLATE VII). The mass-movement was of a composite nature and involved both sliding and flowing motions. Heavy undercutting of the right bank of the Mbaka River was another, if not the major, active cause of this mass-movement. Frequent earthquake shocks may also have played a rôle in preparing the way for this landslide phenomenon. However, the local theory, that an earthquake shock actually triggered the movement is not substantiated. The roaring heard by some people was not caused by an earthquake but by the landslide itself.

19. The following features demonstrate the composite nature of the major landslide in the Mbaka Valley. The upper region has the character of a slip surface of a slump. The backward rotation of the mass produced the typical spoon-shaped form of this deep-reaching surface. There is practically no middle section as the course of the slide was very short. In the lower region or region of deposition, the mass shows characteristics of a debris-slide such as the formation of the irregular, hummocky or morainal like deposit. Since a debris-slide is by definition relatively dry (SHARPE, p. 74) and the presence of much water should lead to the development of a debris-avalanche, reasons must be found why this development did not take place. First of all, it is obvious that the steep slopes favoured surface run-off. The second point is the absence of the very porous pumice tuff, which elsewhere was found to favour percolation into the ground (cf. paragraphs 16 and 17). Finally, the track was not long enough compared with the width of the slide to develop into a debris-avalanche. The mass estimated at 400,000 cubic yards, came to a standstill on the opposite valley side after a short movement. The accumulated momentum at the base of the slide was therefore comparatively small; and however high the water content was, only a minor portion of the mass was caused to flow downstream.

20. The Mbaka River was blocked by this landslide for about eight hours. On account of the steep gradient of the river, however, the dam thus formed impeded the water only to a point about one mile upstream. The river bed below the dam partly dried up and allowed the natives to catch stranded fish. It was fortunate for the people and the cultivated land in the lower Mbaka Valley that the river gradually scoured out a new course and did not burst through the dam.

The nature of other recent mass-movements in the Rungwe Area

21. The debris-avalanches and other types of rapid flowage normally carry little more than the amount of water necessary:—

(a) to destroy the stability of the soil profile which leads to its continuous deformation (flowage); and

(b) to cause an efficient lubrication for the initial movement (cf. paragraph 9).

One exception to this rule was the Kipasa "bottle flow" which was essentially caused by liquefaction. The catastrophic amount of 17 inches of rain caused yet another type of mass-movement which is more closely related to fluvial transportation than to the described landslide phenomena. This type, known as slopewash or washaways, was found to be very common in the Rungwe Area. Combinations of washaways and debris-avalanches, or washaways within or on the edge of fresh debris-avalanche scars were noted in many places. On the whole, however, the magnitude of the proper washaways was found to be small. The largest washaways were seen in the Mbaka Valley north of the major landslide, where the soil cover over the basalt is very thin and was easily washed away on the steep valley flanks. Two small washaways are visible on the right hand side of Telephoto No. 16/42, PLATE VI (cf. also Photo No. 0/42, PLATE I).

22. Slumps are quite a common feature in the area, especially on steeply sloping, cropped hillsides with a thick soil profile. Furthermore, numerous small slumps were observed where the rivers and streams undercut banks formed by soil. Cases of slippage of the slump type and slumps which developed into small debris-avalanches can be noted on PLATE IV.

23. One rockfall was discovered at a steep cliff formed by phonolite on the east side of the Mbaka Valley near Iloto. A nearby debris-avalanche ended as a debris-fall over the steep valley flank (cf. Telephoto No. 16/42, PLATE VI.)

THE LOCAL CONDITIONS FAVOURING THE LANDSLIDE PHENOMENA

24. By applying once more SHARPE's thorough geological study of the subject to the local conditions, the various recognized minor and major factors or causes favourable to landslide phenomena can be outlined as follows:—

I.—*Passive Conditions*

A.—*Lithological:* The character of the soil profile (vide paragraph 6), which frequently has no stable angle of repose.

B.—*Stratigraphical:* The presence of hard or partly clayey weathered, impervious lava under the volcanic ash bed and the pumice tuff layer of the soil profile.

C.—*Seismological:* The northern end of the Nyasa Trough is a recognized seismic region and frequent earthquake shocks may play a rôle in preparing the way for landslide phenomena, e.g. by fracturing rocks or causing deforming stresses in the ground.

D.—*Topographical-morphological:* The broken hilly area, the character of which is governed by the direction of the lava flows around the old centres of volcanic eruptions (cf. paragraph 5). The presence of steep slopes in some valleys produced by active erosion in this youthful landscape.

E.—*Organic:* The lack of soil-retaining vegetation as a result of deforestation; overgrazing; contour "matuta"(6) cultivation or contour ditches on steep slopes.

II.—*Active Causes*

A.—*Removal of support through:* (a) Natural agencies: Outflow of portions of sub-soil through existing underground channels; softening of subjacent ground by absorption of water; undercutting of river banks.

(b) Human agencies: Oversteepening by excavations for house sites or roads.

B.—*Overloading through:* (a) Natural agencies: Landslides or flows (rare); saturation of the soil profile by rain water.

(b) Human agencies: Dumping of waste material from house sites or road excavations at an angle steeper than the usual angle of repose(7).

C.—*Reduction of internal friction through:* (a) Natural agencies: Lubrication of potential slip planes and softening of the soil by excessive amounts of rain water which enter the ground (major cause; cf. paragraphs 1, 9 II, and 21) and consequent unusual changes in the ground water regime.

(b) Human agencies: Lubrication of slip planes and softening of the soil by water as a result of the removal of vegetation cover by fire, deforestation, overgrazing or cultivation, thereby permitting greater percolation.

D.—*Earth vibration caused by:* Earthquakes. This is a potential active cause in the Rungwe Area; it was not, however, involved in the recent landslide phenomena (cf. paragraph 18).

25. The above outline of the conditions in the Rungwe Area clearly demonstrates that the various active causes are all more or less related to the rainfall. Landslide phenomena of the reported magnitude do not, in fact, occur under normal rainfall conditions but are caused by precipitations of a certain intensity. The available records do not yet allow a definition of this "certain intensity". To limit the landslide phenomena to the occurrence of catastrophic rainfall and to consider a risk period of 43 years (1912-1955; cf. paragraph 2) are scarcely justified because:—

(a) the major landslide of the Mbaka Valley and other mass-movements happened on the 5th May, 1955, after 4·85 inches of rain, which was less than the average annual 24 hours' maximum of 6·00 inches recorded at Tukuyu;

(b) records to substantiate the reported catastrophic rainfall in 1912 are not available;

(6) "Matuta" in Swahili means raised beds for planting, long ridges of earth with deep furrows on either side.

(7) The angle of repose is the angle representing the steepest possible slope of the surface of a heap of material. In the case in mind, it depends on the composition of the soil profile and its wetness and varies therefore between 17 degrees and 35 degrees.

(c) the appearance of several scars observed in the Rungwe Area suggests that they were produced by debris-avalanches and slumps much less than 43 years ago.

26. The importance of a dense net of meteorological observation posts and the correlation of the meteorological data with records of perennial hydrometric stations to be arranged at least in the major rivers and with observations related to mass-movements is once more stressed (cf. paragraph 2).

The Practicability of Prevention and Conservation Measures and General Recommendations

27. The normal and usually most effective methods of preventing and controlling landslide phenomena in pervious material such as the soil profile described, are:—

(a) to increase the internal friction by lowering the water content of the mass. Water already present may be removed by ditches, tile drains or other conduits.

(b) to prevent the entrance of excessive amounts of rain water in the ground by making surface run-off from precipitation to be as complete as possible and by diverting the surface flow from unstable ground.

Prevention measures of this nature are generally restricted to locations where the value of engineering structures or projects under construction warrants the expense. The widespread damage done during the recent events in the Rungwe Area, however big or fatal to some landowners, is in no proportion to the expense of such prevention measures. Even the construction of a properly surveyed and graded surface drainage would be quite unjustified economically, since all the drainage channels in the top soil and the pumice tuff would have to be lined. In any case, the fact must be stressed that the possibility of further mass-movements at the sites of the recent landslide phenomena exists and cannot be controlled. They must be allowed to run their course until the shear face has been naturally reduced to a stable angle of repose.

28. A comparison of the affected Upper Grassland Belt with the Rungwe Forest area clearly shows that the deforestation (cf. paragraph 3) must have caused the destruction of the stability of the ground. A complete re-afforestation would therefore be the best guarantee to prevent further landslide phenomena in the Upper Grassland Belt. Again, this is impracticable not only from an economic but also from an administrative point of view, because there is already a land shortage in the densely populated Rungwe District (cf. paragraph 1). Nevertheless, tree planting, if properly directed, would not much affect the economy of the country and would present a possible partial prevention measure. Waldron (1955) who carefully considered this point, came to the following conclusion:—

> "Without doubt, tree planting should be encouraged, and to begin with the very steep slopes, and particularly those showing signs of old landslides, should be closed as grazing land and planted with trees. It is not considered that hill top planting or contour strips of trees will be able to prevent future landslides in time of heavy rain. In point of fact, the trees themselves are unlikely to exert any real effect until the root systems have become well developed and the tap roots have penetrated to depth . . .

[*Photo: E. G. Haldemann*

Picture of the steep upper part of a debris-avalanche in the Mwalesi Valley showing that the initial movement was caused by slippage within the thick volcanic ash layer below the pumice layer. The break in the slope angle marks the contact between the volcanic ash and the underlying weathered basalt. (Pt. D of map)

[*Photo: E. G. Haldemann*

Example of a subsidence in a "shamba" about 800 yards south of Itagata Courthouse. Excess amount of water caused compaction within the soil profile whereby the topsoil subsided. Some of the water drained through small underground channels. Such a case of subsidence undoubtedly represented the first phase of the Kipasa "bottle flow" (cf. Photos Nos. 5 and 6 on Plate III).

[*Telephoto: E. G. Haldemann*

Landslide phenomena near Iloto on the east side of the Mbaka Valley. The slide on the left-hand side started as a pear-shaped debris-avalanche but ended as a debris-fall over the steep valley flank. A small rockfall took place at the steep cliff formed by phonolite visible in the centre of the picture.

[*Photo: E. G. Haldemann*

The major landslide in the Mbaka Valley (Pt. E) as seen from the northern side looking downstream. This landslide is of a composite nature; it started with slumping caused by undercutting of the right bank of the river. Eventually, approximately 400,000 cubic yards of volcanic ash and underlying jointed basalt moved down with a backward rotating effect and blocked the river for eight hours. The dam was then gradually eroded. Note the hummocky, morainal-like character and the typical ponds on the neck of the moved mass.

It is suggested that trees are planted in the lower parts of these slides and *Cedrela* spp.(8) are suggested. These do well in the area and the locals are of the opinion that they will do well in the exposed sub-soil. These trees grow rapidly and coppice readily and will provide useful supplies of firewood.

Further planting of trees, be they *Pinus* spp., *Eucalyptus* spp. or *Cypressus* spp. should be done along the lower edges of the slides in order to prevent further spreading of the damage.

Where the last rains have scoured out deeper channels in the drainage ways and there appears to be danger of further erosion taking place laterally, it is suggested that these stream banks be stabilised by planting bamboo along the banks. Cultivation can still take place behind these planted strips."

29. The above considerations lead to the conclusion that:—

(a) preventive and remedial measures usually recommended from a geological point of view are economically unjustified, as their cost would be out of all proportion to the value of the land which might be saved, and

(b) re-afforestation, which would appear to be the only effective prevention measure from a point of view of soil conservation, can only be carried out to a very limited extent without upsetting the economy of the country.

The question therefore arises, whether there are still other possibilities which would minimize the danger in this potentially vulnerable area or which would help the local people to overcome a material loss. Two such possibilities or indirect measures are suggested. One is the preparation of an adequate scheme of land usage combined with the limited re-afforestation, which should be studied by the authorities concerned; and the other is the introduction of a special insurance scheme.

30. Insurance schemes covering the risk of frost, hail, flood, landslides, etc., to crops and the loss of livestock have long been in existence in the rural areas of Switzerland and other European countries. The Nyakyusa are one of the advanced tribes of Tanganyika and it is felt that the introduction of a well planned insurance scheme of this nature would meet their approval, provided that it is started on a voluntary basis. The important aspect of the type of insurance scheme in mind is that it would not cover human life, and since refunds would be of a proportionate nature according to the assessments and would not cover any loss by 100 per cent, the question of a criminal misuse of the scheme would hardly arise. The writer discussed the matter with Mr. A. S. WALKER, Co-operative Officer, Tukuyu, who was decidely interested in an insurance scheme for crop and livestock against damage by natural causes. Mr. WALKER thought that the Rungwe African Co-operative Union would be a suitable body to run such a scheme. During discussions with THOMAS MWAMBINGU and several local people, the writer learnt that the Rungwe African District Council would be the body favoured by the Nyakyusa to run the proposed insurance scheme, because it represents all people and consequently has more influence. The advantage of the insurance scheme to the District Council as well as to the beneficiaries can hardly be overlooked. As good reasons were given why technical prevention measures cannot be recommended, it seems justified to include in this report the suggestion regarding the insurance scheme.

(8) *Cedrela toona* was suggested by R. D. Nightingale, Forester, whose friendly advice is gratefully acknowledged.

31. An expansion of the meteorological observation in the sense outlined in paragraphs 2 and 26 is strongly recommended. The study of the relationship between the intensity of rainfall and landslide phenomena is of fundamental importance and may turn out to allow a prognosis regarding the recurrence of landslide phenomena. To accept a 43 years' risk period, which is neither statistically nor scientifically proved, is dangerous and should not be allowed to influence actions in the near future (cf. paragraphs 2 and 25).

32. The importance of taking low level air photographs of selected areas is once more stressed (cf. paragraphs 4 and 14). They would form an essential topographical basis for a land usage scheme, planning of partial re-afforestation or catchment area research (HALDEMANN, 1956), and for recording observations related to landslide phenomena (cf. paragraph 26) apart from being essential tools to Agricultural Officers, Soil Conservation Experts, Foresters, Geologists and other technical officers.

POSTSCRIPT

33. The paper demonstrates that landslide phenomena are not only a matter of great interest but also of much greater importance than generally assumed. The geological and other technical literature on Tanganyika is conspicuous by the absence of any descriptions of landslide phenomena despite the fact that they can be noted all over the Territory. Mention may only be made to the Kiberege scarp on the Kilosa-Ifakara Road and the Usambara Mountains. Finally, the writer would like to draw attention to the fact that this report was essentially based on field observations, that no soil mechanical laboratory tests were carried out and that the problem was approached from a purely empirical point of view.

REFERENCES

COSTER, F. M. 1955. Short Report on a Preliminary Survey of Washaways and Landslides in Tukuyu District during April and May, 1955. *Unpubl. Rep. Dept. Water Dev. and Irrig. Tanganyika.*

HALDEMANN, E. G. 1956. CATCHMENT AREA RESEARCH. Proposals for the Organization of Catchment Area Research in East Africa. *Unpubl. Rep. Geol. Surv. Tanganyika*, EGH/34.

HARKIN, D. A. 1954. A Preliminary Note on the Volcanic Rocks of Rungwe District. *Rec. Geol. Surv. Tanganyika*, Vol. I, 1951.

1955. The Sarabwe Lava Flow, Kiejo, Rungwe District. *Tanganyika Notes*, No. 40.

HEIDKE, P. 1914. Meteorologische Beobachtungen aus Deutsch-Ostafrika. Teil IX. *Mitt. dtsch Schutzgeb.*, Bd. 27.

LEHMANN, E. 1924. Das Vulkangebiet am Nordende des Nyassa als magmatische Provinz. *Z. Vulkanol.*, Erg. Bd. IV, 1924. (Reimer, Berlin.).

SHARPE, C. F. STEWART. 1938. Landslides and Related Phenomena. Columbia University Press, New York.

WALDRON, C. W. 1955. Landslides—Itagata Area. *Unpubl. Rep. Dept. Agriculture, Tanganyika.*

SOME NOTES ON NGULU

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Introduction

The country occupied by the Nguru mountains in Tanganyika and hitherto known as Nguru or Nguu is commonly and preferably called NGULU by its inhabitants. This seems to be the correct form and the present tendency in the country is to popularize "Ngulu". So one will read "Ufungilo wa Zigula na *Ngulu*", "Muli dya Zigula na *Ngulu*" (1), etc. When Ngulu is used, the confusion with the Nguru tribes of Mozambique and Nyasaland is avoided.

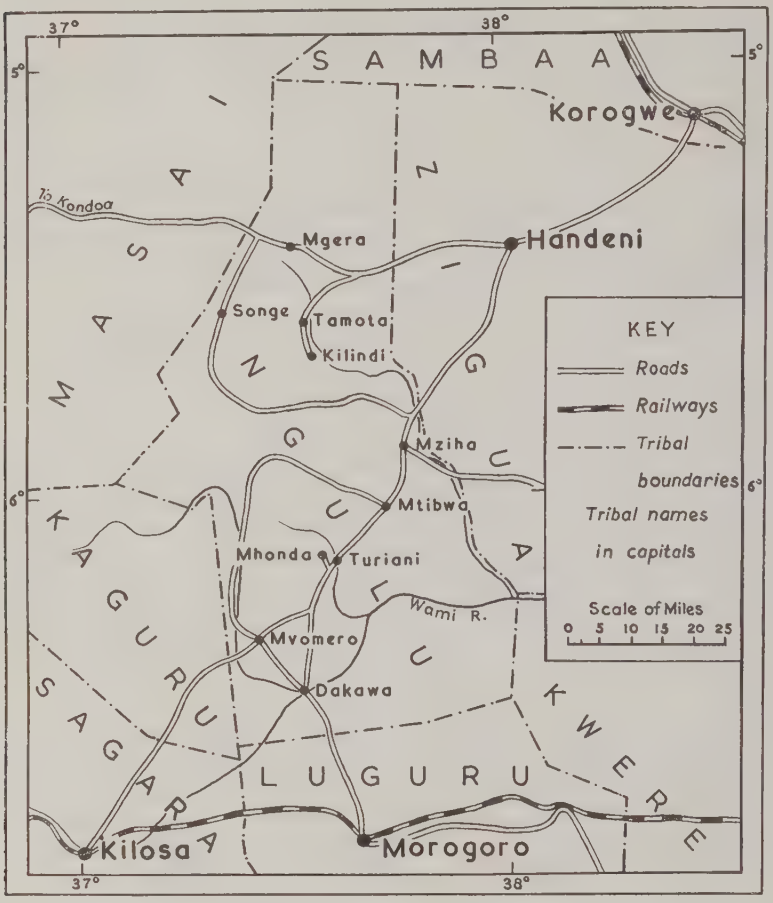
Ngulu, in its names of Nguru and Nguu, is mentioned in several books and papers. Krapf mentioned it with regard to the origin of Kimweri (2), Stanley showed the rough position of the mountains on a map in his book *How I found Livingstone* (3), and Karl Peters made treaties with its rulers (4). Other references will be found in the *Handbook of German East Africa* (5), Sayers's *Handbook of Tanganyika* (6), Brett Young's *Marching on Tanga* (7), and in many issues of the *Tanganyika Notes and Records*, beginning with the first issue, in which the country is mentioned as the place of origin of Mbega, the founder of the ruling dynasty in Usambara (8). In spite of all this, Ngulu has not been described satisfactorily in a single article, and for that matter it has remained practically unknown to many people even within Tanganyika. This may be due to the fact that the missionary and the administrator are living outside the country and in a different tribal area altogether; the missionary being either in Ukaguru (C.M.S.) or in Uluguru (R.C.); while the administrator is in either Uluguru (Morogoro District) or Uzigua (Handeni District), Morogoro and Handeni being the two districts into which Ngulu falls politically. Ngulu has, therefore, received secondary consideration. Another factor may be that being akin to the Zigua the Ngulu have tended to be included in any description of the Zigua (9). But these people have for years remained separate and no attempt to unite them under one name seems to be successful.

These notes are intended to describe very briefly the country and its people: they are not offered as a definitive geography and history of Ngulu.

The Country

Ngulu, lying between latitudes, 5 degrees south and 7 degrees south and between longitudes, 37 degrees east and 38 degrees east is bounded by Uzigua and Ukwere on the east, Uluguru on the south, Kaguru and Masai on the west, and Usambara on the north (10). As noted before, the country falls under two administrative districts—Handeni and Morogoro.

Ngulu can be divided into three physical units—a central mass of mountains and two plains, the northern lying to the north of the Kondoa–Handeni road and the southern lying to the south and south-east of the Kilosa–Korogwe road. The mountains are a result of faulting, and steep ridges are thus a characteristic feature. This heart and core of Ngulu is a part of the rim mountains of Tanganyika, giving place northwards to the Pangani lowlands and eastwards to the low plateau foreland which stands in front of the rim.



Geologically, the country is occupied by the Basement System except for a small band of Quarternary and Recent Alluvium, running north-eastwards from the south of Kilosa to Mziha in Ngulu. This is wide in the south-west but narrows steadily till it ends at Mziha. The Kilosa–Korogwe road follows the western part of this band. The mountainous parts carry mainly non-laterized earths, while the northern plains are occupied by plains soils. On the southern plains are found extensive black clays, but locally, in the higher-lying parts, there are also fertile alluvial soils, shifting debris fans, loose sands, and plains soils (11).

The rainy seasons are from March to May ("mvua za masika") and November to December ("mvua za vuli"). The northern plains, and sometimes the western parts of the mountains, have a rainfall of between 20 inches and 30 inches and

the highest peaks in South Ngulu have a rainfall increasing with height, ranging between 40 inches and 80 inches. The rest of the country has a rainfall of between 30 inches and 40 inches.

There are many streams with a perennial flow of water. The most important of these are the Mkundi, Liwale and Lukigura rivers, which are left bank tributaries of the Wami river. The Wami river, which flows from west to east across South Ngulu, is one of the principal rivers of Tanganyika, draining the plateau and flowing into the Indian Ocean.

Bush and thicket prevail in the more arid parts of the northern plains. In the mountainous parts there is woodland (the "miyombo" woodland). In this area also are found the rain forests (12), most of which are Government forest reserves. On the southern plains are found wooded grasslands.

South Ngulu is served by the Kilosa–Korogwe road which branches at Mvomero to Morogoro; and North Ngulu is served by the Kondoa–Handeni road, of which one branch runs to Tamota, at present a restricted area occupied by Kikuyu. North Ngulu comes mostly into contact with Handeni, Korogwe and Tanga, while South Ngulu looks to Morogoro and Dar es Salaam for contacts. Mziha seems to be the dividing point, being 88 miles from either Korogwe, on the Tanga Line, or Morogoro, on the Central Line.

The People

The Ngulu belong to the "early" Bantu group, the tribes of which resemble each other considerably in speech and customs (13). The Ngulu are closely related to the Zigua (or preferably Zigula), their languages, manners and customs being almost identical. But for obscure reasons they have remained separate, each group being proud of its own traditions. They all agree that they belonged to one tribe in the past and that they came from the north, perhaps from Galaland, as Selemani Kiro puts it in his article, the translation of which by Petro Mntambo appears in the *Tanganyika Notes and Records* of January, 1953 (14); whilst more immediately they passed through Kondoa to where they are now. They differ in that the Ngulu claim to have settled first, with the Zigua as an offshoot from them, whereas the Zigua maintain that it is the other way round.

To support their case the Ngulu say that they settled first on the Ngulu mountains and, when land was not sufficient for them all, some moved eastwards into the plains which were occupied by the Ndorobo. After a series of wars the Ndorobo were driven out and the Ngulu occupied the country. These newcomers were then called Ziguha which means literally, "they have taken them (the countries)". Others called them Zigula because, they said, they had not merely taken them, they had bought them by blood through fighting; and this is the name they retain to this day. The Zigua on their side say that the people coming from the north through Kondoa settled in Zigua first and then due to land hunger some of them spread to the mountains and these were called Ngulu because, living on mountains, they looked as if they were living on the ceilings of houses. It seems that the case put forward by the Ngulu carries more weight because, to begin with, it is true that the Zigua drove out the Ndorobo and in this both the Ngulu and the Zigua agree; it is possible, therefore, that the name Zigula originated from their occupation of the plains. Secondly, their movement was eastwards from Kondoa towards the coast. It is natural that they came to Ngulu before they reached the present Uzigua. The route of the present

Kondoa-Handeni road exemplifies this fact. Even from Selemani Kiro's article we hear that Mkunde was married in the Ngulu mountains long before the eastward movement ceased. Moreover, Seuta, of whom both tribes are proud as their warrior-hero (15), lived in Ngulu all his life.

The movement from Ngulu to other parts of Tanganyika seems to have gone on for quite a long time and, in fact, until very recently. There are several possible reasons for this outward movement. Many people, such as the Ngulu who emigrated to Kilosa, Mpwapwa and Dodoma districts in bad years and especially in the early 1930s, were forced by famine to leave the country. Others left the country for adventures or under forced circumstances. Mbega, self-styled "Mbega of Nguu" (16), whose followers and descendants form a distinct group and are the ruling class in Lushoto District, provides an example of this. His followers and descendants may account for the large number of Ngulu in Lushoto District. Many more, as stated above, left the mountains for the plains due to land hunger. This last-mentioned movement may strike one as an earlier counterpart of the modern development schemes of Tanganyika, with their aim of settling the plains by emigrants from the overcrowded hill-country as a prelude to the rehabilitation of the latter.

The Ngulu have been traders for a long time, and Krapf mentioned Ngulu (Ngu) as one of the countries trading in slaves and ivory (17). On their way to the coast where they had to sell their goods the Ngulu passed through Uzigua where they were taxed. They resented this and in many cases they had to fight. From that time there developed a hostility which has marked the relationship between the two tribes but which has now disappeared.

The Ngulu lived then, as most of them do now, in widely spread villages consisting of conical grass thatched huts, a small collection of ten or twenty huts comprising one village. Over these villages certain headmen ("jumbes") held jurisdiction, and they took tribute from them. They were nominally under the Sultan of Zanzibar, whose authority they could throw off whenever they wished. They always kept, and still keep, their bows and arrows, which form their national arm, in an excellent order, the arrows well poisoned and nicely carried in quivers.

When the Germans came they introduced their system of government by which a number of "jumbes" were placed under an "akida". The country was also divided into divisions which came under four districts—Pangani, Bagamoyo, Morogoro and Dodoma (18). The system remained thus until the British occupation of Tanganyika when they introduced Indirect Rule so that instead of an "akida" there was a "zumbe" and Ngulu came under two districts—Handeni and Morogoro. These divisions tend to disrupt the unity of the Ngulu.

The Ngulu tribe according to the 1948 census figures number 65,672. More than a third of this number live outside the country. Their distribution by Districts is as follows:—

Mpwapwa	...	...	...	1,142
Handeni	...	...	...	17,408
Lushoto	...	...	...	22,625
Kilosa ...	...	...	...	2,853
Morogoro	...	...	...	21,644

An interesting feature is their large number and even distribution in Lushoto District. The tribe is the second largest numerically in each of the three districts—Handeni, Morogoro and Lushoto. A few people from other surrounding tribes reside in Ngulu but their number is small.

The Ngulu are mostly agriculturalists and stock rearers. They cultivate maize, millets, cassava, beans, peas, sweet-potatoes and fruits. Although most of the country is tsetse-infested, yet goats and sheep are reared, and in North Ngulu a few cattle are kept. For cash crops the Ngulu have native tobacco, castor plants, cotton and coffee. Many of them become traders and the important trading centres are Ngera and Songea in North Ngulu; Mziha, Turiani, Mvomero and Dakawa in South Ngulu.

Some people are employed in the European- and Asian-owned plantations found mainly on the alluvial plains of South Ngulu. Others are employed by the timber companies operating at Mtibwa in South Ngulu, and at Malela near Kilindi in North Ngulu. Sometimes employment can be obtained in mica mines, but on the whole mining is not important.

The majority of the Ngulu are Mohammedans who are locally organized. The rest are Christians. The Roman Catholic Mission is active in South Ngulu, while the Church Missionary Society is predominant in North Ngulu which has produced the first African Archdeacon (the Ven. Archdeacon Daudi Muhando) and the first African Assistant Bishop (the Rt. Rev. Yohana Omari) of the Diocese of Central Tanganyika. Missionaries are striving hard to provide schools and hospitals in their respective areas, and in this work the Native Authorities help to a great extent. Education is still primary with the exception of the Girls' Middle School at Mhonda in South Ngulu. These are a few of the external influences which are likely to affect the future developments of Ngulu.

References

(1) *Tanganyika Notes and Records*, No. 34, January, 1953, p. 70 (Editor's Footnote).
(2) Krapf, J. L. *Travels, Researches and Missionary Labours in East Africa*, 1860, p. 382.
(3) Stanley, H. M. *How I found Livingstone*, 1872, Frontispiece.
(4) Coupland, R. *The exploitation of East Africa 1856-1890*, 1939, pp. 401, 405, 407, and 431.
(5) *Handbook of German East Africa*, 1916, pp. 24, 36, 40, etc.
(6) Sayers, G. F. *Handbook of Tanganyika*, 1930, pp. 229, 272, and 460.
(7) Young, F. B. *Marching on Tanga*, 1917, pp. 219, 250, and map.
(8) *Tanganyika Notes and Records*, No. 1, March, 1936, pp. 38-51.
(9) *Tanganyika Notes and Records*, No. 15, June, 1943, p. 57 (Footnote).
(10) *Tanganyika Atlas*, 2nd Edition, 1948, p. 11; *Tanganyika Notes and Records*, No. 35, July, 1953, opposite p. 2.
(11) Milne, G. *A Provisional Soil Map of East Africa*, 1936, p. 29.
(12) Sayers, G. F. *Handbook of Tanganyika*, 1930, p. 272.
(13) *Handbook of German East Africa*, 1916, pp. 23-24.
(14) *Tanganyika Notes and Records*, No. 34, January, 1953, pp. 70-74.
(15) *Tanganyika Notes and Records*, No. 33, July, 1952, p. 91.
(16) *Tanganyika Notes and Records*, No. 1, March, 1936, p. 43.
(17) Krapf, J. L. *Travels, Researches and Missionary Labours in East Africa*, 1860, pp. 373-374.
(18) *Handbook of German East Africa*, 1916, pp. 44, 124, 126, and 150.

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THE EARLY DEVELOPMENT OF EDUCATION AMONG THE CHAGGA

By G. N. Shann

On 10th October, 1848 a missionary, Johannes Rebmann, advancing through miles of arid thorn-scrub, noted that "at about ten o'clock I fancied I saw a dazzling white cloud". (1). This "cloud" was, in fact, the snow-capped dome of Kibo, the summit of Mount Kilimanjaro. The slopes of this mountain now form the Moshi District of the Northern Province, and about eighty-five per cent of its population consists of the Chagga tribe. Within the last thirty-five years of British administration the population of this tribe has doubled, and about half of the 250,000 Chagga are under sixteen years of age (2)—an important factor when planning the expansion of educational facilities.

Little is known of the aboriginal inhabitants of this area, of whom the Konyingo and Gasseni are remnants, but, about five centuries ago, offshoots from several tribes—the Taita, Masai, Kahe, Pare and the Sambaa—started to settle there (3), and only during the present century has any real unity been achieved, although there was a tendency during the nineteenth century for chiefdoms to become fewer and larger, especially in the hey-day of Horombo and Rindi. In their mountain fastness they were able to develop their own institutions without interference, but when European penetration broke down this isolation the adoption of Western customs became all the more catastrophic and complete (4). Permanent intercourse between the gorges which radiate from the summit and administrative unification have only been achieved in European times (2, 5). Linguistic diversity has only been overcome, mostly due to European legislation, by the recent adoption of Kiswahili as a tribal, as well as an inter-tribal, lingua franca—an exceptional feature in an upcountry tribe. The degree of unity now achieved by the Chagga is, considering their varied origins, remarkable.

The Chagga are also exceptional among Tanganyika tribes in that they are blessed with an ample rainfall and good soil. Most families possess a well-irrigated plot on the upper slopes ("Kihamba" land), where coffee, bananas, and eleusine are cultivated, and a lower drier and larger plot for growing maize ("Shamba" land), while the women, in addition to their duties as cultivators, housekeepers and collectors of firewood, fetch grass from the plains for the stall-fed cattle in the "kihambas". (2, 6). In this, I think, lies the key to the exceptional capacity of the Chagga for adaptation to or, at any rate, imitation of European methods. Adequate food crops, milk and meat make malnutrition a rarity, and healthy Arabica coffee, which, controlled by the well-organized Kilimanjaro Native Coffee Union, commands a high price on the world market, has ensured a comparatively smooth transition to a cash economy, where "the shilling takes the place of the brother" (7).

Education is, of course, only one of the influences at work in this process of adaptation, but its development cannot be estimated as it were *in vacuo*. Without these economic factors no educational development could have taken

place, while home, school and society continue to react on each other in more advanced as well as in more primitive communities. If Education aims at "forming character, fitting the individual into society", and "adjusting the relationships between members of successive generations" (6), then it is necessary to consider the original tribal system of formalized instruction, before estimating the significance of more recent developments: for the tribal system did, to a large extent, achieve those aims within the society which evolved it, and showed within a limited field a degree of integration which has never been regained. Fortunately, there is no lack of material dealing with the Chagga. The following observations are based on the works of Gutmann (7, 8), Raum (6), Dundas (3) and Mwitori P. I. Marealle (9).

We find, highly developed, many factors common to most Bantu societies. Initiation ceremonies for both sexes, accompanied by tests of physical endurance and knowledge of tribal lore. Emphasis on respect for elders and on duties within the kinship group, which forms an organic unity; obligations to the chief; learning through memory and example; through seeing and touching; rather than through "chalk and talk", books, or individual, competitive efforts. Among the Chagga certain additional features are to be noted. Special reciprocal relationships are found among age groups (*rika*), as well as among kinship and tribal groups, each of which has its rights as well as its duties. For example, an unpopular boy on the pasture was often ostracised by his companions, and parents were not allowed to intervene on what was really a kind of "fagging" system: in fact, direct interference from the parents was increasingly resented or circumvented (6). It is significant that in the first mission schools pupils would often get up during lessons and strike their more inattentive comrades. Education thereby became an active and creative, not a passive or conservative, process, and the play group or age group was often, through the use of praise and blame, rewards and punishments, more successful than the family in making the individual conform to its standards and better himself through trial and error. The young Chagga could claim rightly, as he still often does, to have "taught himself". Gutmann also sees in the assumption of power by associations based on age from those based on kinship the origin of the State's consciousness of power (7). This may help to account for the ease with which the Chagga have adopted many Western ideas of government.

Secondly, among the Chagga we note the persisting strength of mystical sanctions (8), which Dr. Monica Wilson has told me also persists among the Nyakyusa. This ensured a feeling of security and permanence and added strength and significance to otherwise meaningless actions. It also facilitated the work of the early missionaries. Father Le Roy (4) was much impressed, as other missionaries are today, by the primitive Chagga's comparatively advanced conception of religious duties and by the existence of Ruwa, a personal, omnipotent and creative God. It is indeed fortunate that neither of the Missions working in this tribal area have taken up an intolerant attitude towards these mystical conceptions. "The African", said Gutmann, "has a spiritual home, the only home he has. If it is taken away from him, he will be left homeless" (7). We therefore find the actual practice of circumcision is dying a natural death, as it has not been stimulated by persecution, and many of the old sanctions have been unconsciously assimilated in the new order, thus lessening the separation of religion and education which has unfortunately developed elsewhere. However,

we must also remember that old sanctions often die hard or assume new shapes, that an insistence on secrecy may still have to be reckoned with, and that in the "running mythological elaboration of current affairs" (6) the older generation may still wield greater influence than it is credited with. In any case, when these old sanctions have died out completely, we still have to ask ourselves what, if anything, has taken their place.

Perhaps, owing to the mystical strength underlying early Chagga customs, it is possible to see what is almost a theory of education behind the various riddles, proverbs, questionnaires, local didactic hymns and even behind parental comments on the tests themselves. Raum (6) compares the Chagga conception of education as a moulding process with Locke's assumption that education is an engraving of letters upon the *tabula rasa* of the child's mind. One also finds that, although it was the mother who first impressed on the infant the need for unselfish sharing by means of various taboos, parents were willing to hand over the control of their children to educational specialists—nurses, grandparents, secondary parents, instructors and chiefs—who, by elaborate techniques, ensured the child's conformity to tribal standards. The Chagga, in the past as in the present, had a great respect for a good teacher (7).

One also notes the elaborate nature of the instruction given to girls at the Kisusa or purification before puberty, in the Mregho or tally (a mnemonic device with magical significance), at initiation and in the Shiga rites before marriage, which older Chagga women assert has enabled girls to dare to challenge their male age mates. Johnson noted in 1884 that the Chagga women were accorded more consideration than is common in Africa (10).

The favourable soil and climate of Kilimanjaro has already been observed. In the early instruction given in agriculture we can see that this was put to good use. It afforded valuable lessons in economic co-operation and social interdependence. The significance of furrow rights, bee-keeping ritual (usually with mystical sanctions), obligations to cultivate and kindness to animals were taught at an early age. Concrete facts and real situations, not unlike projects, were used in dealing with the work of nature. Cultivation did not appear as useless or despicable, as so often was the case in areas more troubled by slave raids (11). Le Roy (4) noted the intricate furrow system, the lively markets and the practice of manuring, although the agricultural implements used were very primitive. Johnson (10) praised the square gardens and hedges as well as the healthy goats. The children saw him collecting specimens of monkeys and eating blackberries, and it was not long before they came to his camp to sell him these useful commodities. He also saw them selling poultry to Swahili travellers, although the Chagga themselves despised it as food. "How observant and practical the people are and how they seize any lawful occasion of making money!" A few years later we find the parents insisting on providing cows so that animal husbandry could be taught at the first girls' school at Kidia (16). These early attitudes account for the modern Chagga's realization that good husbandry is so obviously a paying concern and for their acceptance of economic innovations initiated by Europeans. Although the Chagga were not, and are not, in advance of other Bantu tribes as craftsmen, there is enough evidence to show that their present interest in mechanical work and technical instruction is not a completely new development. For example, there were cunning smiths and

tanners in certain clans (5, 10), and wood carving, particularly in the making of domestic utensils, often reached a high standard, while Rindi wanted Johnson to send him mechanics and to teach him to play the organ (10). Raum (6) notes the manner in which the old anticipatory play tended increasingly to emphasize European patterns, particularly in the manufacture of toys, where the technical experimenting done by Chagga boys, once the idea of a wheel had been suggested, produced many interesting results. Even today I find that their home-made scooters and wagons show more variety and improvization than anything learnt during formal handicraft sessions at school.

Finally, Gutmann quotes the actual words of instruction given by an old man before initiation, which begins with this statement, "I say to you, my grandchildren, when you go as an age class on the road, each lad with his comrades, you must be equals". And so on in this vein. Although Gutmann tends to idealize the past of the Chagga (8), as his compatriots have idealized the tribal past of their own race, several observers have seen in the past, as in the present, of this tribe an unusual realization that education should be universal and democratic. It must be admitted that the strong feelings of loyalty to the legitimate chief was one of the main factors ensuring continuity in the early days of European intervention, but this loyalty never degenerated into the servitude to alien conquerors that developed further west (11), despite the fact that the death of the old mystical restraints removed a restraining element on the absolute power of rulers.

Having thus touched on some aspects of the indigenous system of education, I will now, following briefly Malinowski's functional treatment of social change, attempt to describe the impact of the impinging cultures. (12). For this purpose, one can discount, for the moment, Arab and Indian influences, and confine oneself to the educational activities of the two main missionary societies which have worked among the Chagga. As it was a Protestant Missionary who first entered this area just over a hundred years ago (1), I will start with the work of the Protestant missionary societies up to the establishment of effective Government control in 1925.

As early as 1851, Krapf, Rebmann's colleague, was promised staff by the Church Missionary Society Committee for work in "Jagga-land" (13). But this came to nothing. For many years we have to be content with the observations of travellers—Baron Von der Decken (14), 1862, Charles New (15), 1871, Joseph Thompson (5), 1883, Doctor K. Juhlke (16), 1885 and Sir Harry Johnston (10), 1884. All these commented on the intelligence and cunning of the Chagga in general and Mangi (Chief) Rindi of Old Moshi in particular. It was not until March, 1885 that Krapf's appeal was answered and that Bishop Hannington, accompanied by two missionaries, Fitch and Wray, visited Old Moshi from 17th March to 27th March. They obtained a plot of land at Kitimbiriu, where Johnston had spent a few months during the previous year. This visit was followed up by the arrival of A. R. Stegall from the C.M.S. station at Taveta (13). Mr. H. A. Fosbrooke, Senior Government Anthropologist, has told me of an interesting link with Stegall. *Justin Lemenye, who helped in composing a work on the Masai (17), is now a very old man and lives in a primitive Masai boma near

**Editorial Note:*—See *Tanganyika Notes and Records* Nos. 41 and 42:—"The Life of Justin" by H. A. Fosbrooke. Justin Lemenye died at Same on 23rd June, 1954, after this article was written.

Same, but still speaks English clearly, though with hesitancy. Although an Mkwavi captive in Masailand, he was as a youth compelled to seek food and shelter from the Chagga, and lived for six months at Old Moshi in the court of Rindi who sent him, along with thirty other children, to be instructed by Stegall and a Dr. Baxter. After a year or two at Kitimbiriu, he was sent to the coast at Freretown for further instruction and baptised in 1894.

Although the notorious Dr. Karl Peters had, by means of fictitious treaties, set up a German Protectorate over Kilimanjaro in May, 1885, there was considerable fighting between 1890 and 1893, which led to the final establishment of German rule and obliged the C.M.S. missionaries to return to Taveta. At a meeting in London in February, 1893, it was agreed that the work started by the C.M.S. should be handed over to the Leipzig Lutheran Mission, who were already working in the Kamba country. In October, 1893, four mission Brothers, Gerhard Althaus, Robert Fazmann, Emil Muller, and Albin Bohme, arrived in the district and, as the area around Kitimbiriu was not yet pacified, settled at Machame, where the young Mangi Shangali gave them a plot of land. Two of the first catechumens to be baptised (on 30th January, 1898) had been pupils of Stegall.

From now on the pace quickens. There were 170 pupils in 1889 (including 21 baptised Christians), 5,817 in 1909, and 8,721 in 1914 (13). Permanent mission stations were opened in Mamba in 1894, Moshi in 1896, Shira in 1899, and Mwika in 1901. As soon as possible, instruction was provided in these places to such children as cared to entrust themselves to the supervision of the local missionaries. These were usually misfits, nominees of the Chief or lads of exceptional spirit. Soon after the turn of the century, however, the passive attitude of waiting for recruits to come in was replaced by the more active policy of stimulating recruitment and selecting the most suitable. This change of attitude inevitably led to contacts being made with the Roman Catholic Missionaries and the local Administration. Until the days of the Mandate, by the rule "*cuius regio, ejus religio*", one or other Mission was given a free hand in each Chiefdom. This had an unfortunate effect in producing inner conflicts in the life of the tribe, but educationally it led to greater efficiency, as local responsibility became clarified and there were no cases here, as there were elsewhere, of two rival Mission schools in one village competing for the upper hand, while the neighbouring village is, as often as not, ignored.

On 8th April, 1902 the "Seminary", where potential pastors and teachers were trained, was started at Machame, as a result of an educational meeting of Chagga missionaries in 1901. Fazmann moved it to Kidia, Old Moshi, in 1902 with nine Chagga pupils. It was moved again under J. Raum to its present situation at Marangu in 1912, where teachers were divided into two grades, German and Swahili. At Kidia a printing press was set up in what is now the office, and a "Central School" was added. "Science and Artisanship" were taught here, presumably with some success, as the early teaching of hygiene, agriculture and industry in German Missions was praised by the Phelps-Stokes Commission after their visit to Moshi in 1924 (18). Instruction was carried out in the vernacular and books were published in three of the more important local dialects, Kimachame, Kimoshi, and Kimamba. It is interesting to contrast this with the local Roman Catholic Missions who used Kiswahili, after an early period of emphasis on French and then on German.

Kidia was a central station school. There was also a Central Village School for boys at Machame, of which we have a detailed description in 1901 (13). The fifty pupils were housed in dormitories for five and in very small classrooms built of stone with banana thatch. It was claimed that they were self-supporting; agricultural work was expected from everyone, especially before fees were charged in 1907. They wore "shukas" draped across one shoulder, as was recently the uniform in certain Masai schools. The local missionaries noted their exceptional capacity for memorizing facts and their ability to learn to read words within six months. Their tendency to slip away from the Mission and get drunk was also commented on! They were divided into two classes. The weekly syllabus of the upper class was as follows:—

Bible Study: Six periods of one hour.

Arithmetic: (Up to multiplication by three figures). Four periods of half an hour.

Reading: (Using *Kitabu Kya Isoma* which was printed in Kimachame). Four periods of half an hour.

Local Geography: Two periods of half an hour.

Dictation: Two periods of half an hour.

Writing: Two periods of half an hour.

Composition: One period of half an hour.

These facts indicate that the Chagga, fortunate in their opportunities of obtaining schooling, none the less, seized them more readily and at an earlier date than other Tanganyika tribes. However, the Girls' School at Kidia, started in 1906 under a Sister, was at first less successful. The missionaries complained that the girls came forward in very small numbers and were at least a year behind the boys. "They gossiped and fought, stole like magpies and lied like heathens" (13). Before the girls had learnt much of their duties as mothers and housewives, they tended to run away in order to get married. Then, as now, a Girls' School was a popular matrimonial agency. As late as 1929, Gutmann, "looking like a cross between Shakespeare and a bearded saint, lit by an intellectual gleam" (19), confided to Professor Huxley that he was afraid of the effects of the schooling on the girls at Kidia, particularly in the resulting neglect of cultivating staple food crops.

Two first-hand accounts of these early days are of interest, Mr. Philipo Njau, who is still on the staff of the "seminary", says that, in about 1899, the local missionary who had been prevented by his mother from recruiting his elder brother persisted until successful in receiving him as a boarder in his school at Kidia. There his elder brother learnt Stegall's translation of St. Matthew's Gospel one word at a time until eventually he came to read the entire New Testament three times over. He also learnt how to count up to a hundred with the aid of stones. He then returned home during several years of famine, but later entered the "Seminary" at Marangu with thirty other boys, three-quarters of whom were Chagga. About half of them "passed out successfully" in 1916, but the standard of performance was very uneven, some almost reaching a stage equivalent to the present Standard VI, some barely Standard II.

Pastor Immanuel says that he with thirty boys from Mbokomu joined the hundred boys at Kidia Central School under Fazmann in about 1905. The principal motive in doing so appears to have been to avoid being recruited as forced labour by the German Government. The method of teaching reading seems to have been similar to the "each one teach one" approach and he repeated words and phrases read to him by an older boy. The school closed down temporarily a little before Van Deventer's army entered Moshi in 1916, and Immanuel remembers the arrival of Sir Charles Dundas, whose kindly reception of the children emboldened the authorities to continue the work of their education.

The 1914–18 War undoubtedly retarded education work in this Mission. Pupils in Lutheran Schools were over 8,000 in 1914, dropped to 1,850 in 1915 and did not reach the 8,000 mark again until 1925. The Director of Education wrote in 1924 that "practically every Mission reports unopened schools and an attendance of only a fraction of pre-war days" (20), so that even this rate of recovery was exceptional. In August, 1920 the German missionaries were expelled. In 1921 the Evangelical Lutheran Augustana Synod of America sent replacements, but in 1925 the Germans were allowed to return. The Leipzig Lutheran missionaries, like other German missionaries, now became even more numerous and more energetic. They tended to adopt a more definitely religious basis for their educational work, and to become increasingly reluctant to co-operate with Government and other Missions in spreading Western or materialistic civilization (21). Unfortunately, as the years passed by, the religious basis tended to become Nazi rather than Christian and the attitude of non-co-operation was not always applied to the German Government. At the outbreak of the last war the German Missionaries were expelled once again.

Meanwhile, the Holy Ghost Fathers had built up their educational system in several chiefdoms. In 1860 the first Roman Catholic missionaries to enter East Africa arrived at Zanzibar and in the following years set up mission stations in the hinterland. During the eighteen-eighties Mgr. de Courmant, Vicar Apostolic of Zanzibar, had wished to penetrate the Chagga country, but not until 1890 was he able to do so. Guided by a young man from Kilema and accompanied by Fathers Le Roy and Gommenginger, he reached Mangi Fumba's court at Kilema on 16th August. His party was well received and specifically asked to give instruction in matters both spiritual and secular (4, 22, 23). The missionaries were promised as many children as they wished to attend their new school as boarders with only one proviso—that they should not be obliged to eat poultry. When they had established their base at Kilema, they travelled round the mountain as far as Machame in search of an alternative site for a mission station. On the way, at Old Moshi, they visited Mangi Rindi whose intelligence impressed them as it had their predecessors. Here, too, they saw d'Eltz, the representative of the German Government, whose mild rule was shortly to be replaced by that of the belligerent von Bulow. They also visited the two modest rectangular wooden huts of the C.M.S. Mission, and found the company of the resourceful Dr. Baxter more congenial than that of the suspicious Stegall, who *quand il est là y'éxplique des textes à quelques enfants* (4). Kilema was selected as the most promising site and Father Gommenginger, who had received a valuable apprenticeship in this pioneer work when he founded the Ilonga mission in 1885, was left in charge. Now the Lutheran pioneers usually devoted their energies to building up native congregations before opening up schools for the children of Christian parents (11). The Catholics on the other hand, felt bound to open

schools as soon as possible and to see that they became entrance wedges for Christian influence, extensions of the Christian home and pulpits for the young. A pastoral letter from Mrg. de Courmant issued in January, 1892, illustrates this policy and gives detailed instructions on the opening of schools in new areas (23). A few quotations are relevant:—

(a) "Bring the little children to school as soon as they are capable of learning.

(b) *Direction:* A father of the mission, usually the second father, must be charged with the schools. He supervises and directs and completes the work of the teachers, men or women. He trains the children to show respect and reverence as christians.

(c) *School work:* For their secular needs the boy pupils will learn reading, writing, the four rules of arithmetic, a general knowledge of singing. The girls will be taught reading in particular. Religious instruction will comprise the catechism, the text and explanation of the truths of religion—sacred history, church singing, church chants and also church hymns. Professionally the boys will be taught agriculture: some will learn carpentry and building, when possible. Girls will be taught sewing and laundry work. All will be taught reverence for God and drawn to piety by fervent instructions and exhortations given during the catechism lessons. The sacraments, in particular Confession, Holy Communion and Confirmation, will be thoroughly explained in the schools. All will be urged to profit frequently from the Sacraments of Confession and Holy Communion. A taste for true Christian devotion will be developed in the hearts and minds of these new Christians.

(d) *Teachers:* They will be chosen from the better instructed and the more conscientious Christians. They must be formed to the teaching profession and its methods: they must be followed up in their work and be guided constantly. Women teachers should be chosen especially from among married persons. All must be paid a salary, though they will, of course, have their "shambas" and "vihambas" like everybody else".

One is not then surprised to find that the school at Kilema was one of Father Gommenginger's main preoccupations from the start. Although, like Stegall, he had to withdraw temporarily to Taveta, when fighting broke out in 1891, he soon returned with twenty craftsmen from other mission fields, to whose number were, in due course, added twenty-five young Chagga and Masai (4). "In the Mission", he wrote in the 1892–3 annual report, "there are 36 boys, 16 girls—total in all schools 87 children". In 1897–8 he was able to report remarkable progress:—

	Boys	Girls
Kilema Boarding School	74 ...	40
Kilema Day School	90 ...	83
Fumba School	90 ...	50
Lombeda School	112 ...	92
Kirua (Vunjo)	80 ...	35
Total ...	446 ...	300

In February, 1901 the Kilema Mission obtained a large freehold of 532 hectares (2), and in 1904 we note the arrival of the first Sisters. In 1906 we find 1,150 boys and 1,248 girls in 22 schools and from then until 1928 this figure increases very little. The high proportion of girls at this early stage is noteworthy.

Meanwhile Mr. Rohmer had founded Kibosho Mission further to the west (1893), and Rombo on the east of the mountain a year or two later. In the 1897–8 annual report we find 600 boys and 400 girls in the Kibosho schools and 224 boys and 136 girls in the Rombo area. Nine years later the total enrolment in Kibosho has grown to 4,300 and in Rombo to 2,735 and in 1909 new Missions at Mashati and Uru claim 1,905 and 110 pupils respectively.

We are fortunate in having records of the ambitious course of instruction provided. The pastoral letter of 1892 has already been quoted. Another, issued by Bishop Vogt on 12th October, 1908, goes into even greater detail:

> "The school programme must comprise Reading, Writing, Elementary Arithmetic, Catechism, Sacred History, Singing. German will be taught when possible to the more intelligent pupils.
>
> *Teaching* will last from 2 to 3 hours daily."

(*N.B.*—In Moshi area, schools were usually in session for 2 to 3 hours per day for 3 days every week during 26 weeks every year in a three-year course).

> "Trades and farm work will also be a part of the training and a salary proportional to the services rendered will be paid.
>
> The out-schools or catechetical centres will have as subject matter Reading, Writing and Arithmetic and one must do more than repeat the prayers and catechism text. These must be explained even to the children. Catechism and Bible History will remain the important part of the programme in these outside schools or bush schools. The missionaries must follow the school work with the keenest interest. If our pupils are well trained we shall have good Christians. Those who show no interest in becoming Christians must not be rejected—baptism must not be the condition for education, for it is good to have the affection and sympathy of the people even if they remain pagan. The missionary must wait for baptism till people decide for themselves."

At the same time he wrote an interesting memorandum to the Imperial German Government, in which he claimed that the Government did not give mission schools sufficient moral or material support and that Government schools tended to work in favour of Mohammedan teachers and pupils. He also commented on the scheme of work:—

> "A simple horarium allowing ten hours of school work each week should be enough in the present conditions of the country. In the central mission schools a larger measure of school work could be undertaken. As soon as attendance improves the work in the out schools might be extended."

There was also some practical activity (23). In the early days at Kilema children assisted a Lay Brother in introducing livestock and planting vegetables and fruit trees. A parcel of coffee beans from Reunion reached Kilema in about 1895 and so inaugurated the development of the now flourishing local coffee industry. Some of the older pupils picked up valuable information on carpentry and building when working under the Lay Brother. From the start

the girls learnt domestic work in mission laundries, sewing rooms, kitchens and poultry yards. These girls usually remained as boarders at the Mission until the time came for marriage. Incidentally, the Sisters experienced considerable difficulty in enforcing a reasonable standard of cleanliness and attendance, as well as in coping with the local medicine men.

Local enrolments show tremendous variations, particularly those for Kilema and Uru areas between 1912 and 1920. These may partly be due to political disturbances and economic uncertainty, partly to untrained teachers and poor attendance among pupils when the novelty had worn off. One also notes that the Roman Catholics felt the impact of the war more gradually than the Lutherans but were slower in recuperating from its effects.

Bishop Munsch became the first Vicar Apostolic of Kilimanjaro and the work of his missions continued to expand until the 1914–18 war. Some of the missionaries were then interned and sent to Egypt or India, while those who remained were cut off from the outside world and obliged to live "in native style" (4). All European sisters were ordered to leave in 1920. From 1919–22 French fathers took charge of the work until the arrival of Father (later Bishop) Gogarty, who was followed by many new Irish and American fathers.

Before considering the attitude of the German Government, brief mention must be made of the advent of Islam to Moshi District. The worthy New (15) was horrified by the activities of Swahili Muslims, mostly slave traders, at Rindi's court, but twelve years later Johnston (10) wrote that "Mohammedan influence has not as yet initiated the Wachagga into vicious thoughts and ways", and later still Father Le Roy (4) noted that no Muslims had been allowed to establish themselves permanently at the courts of the chiefs. Geography, no doubt, played its part in limiting early Muslim penetration. It is not until the 1914–18 war that we hear of conversions to Islam. The Lutheran Year Book cryptically remarks, "Islam came in with British troops" (13). On the other hand, the Roman Catholic priest at Uru complained in 1919 (2) that his school and church were empty owing to popular reaction to the return of certain Wachagga, who had been exiled on the strength of representations made by his fellow missionaries, and whose return had brought in Muslim tendencies for the first time. Be this as it may, in 1927 we hear of 700 Christians being re-baptised by a Muslim Sherif (11), and of new Koran schools, the one in Moshi Township receiving encouragement from the Khoja community. Like the registered Muslim schools now existing in Moshi District, these places were undoubtedly hopelessly inefficient by western educational standards, but they offered, and still offer, an opportunity for self-help often denied in more efficient organizations and a persistent undercurrent of opposition to the establishment of a monopoly of educational control by Christian missions.

In spite of the lack of contemporary official documents on education policy, there is no doubt that the German Government played an important part behind the scenes in these early days. "In Education alone", wrote G. L. Steer (24), "did the Germans carry out their human obligations to the full. The curriculum was limited, but its subjects were well spread." An official Report admits that the Germans did more than the British before the War to train the African as an integral part of an efficient administration. For example, the German Administration was able to make use of a constant supply of literate akidas and clerks and there were special training schools for soldiers and for several Government

Departments. Government and Mission periodicals such as *Pwani na Bara*, *Rafiki yangu* and *Kiongozi*, supplied reading matter in Kiswahili for those newly literate in Swahili. Mention must also be made of *Druck und Verlag der Schuldruckerei*, a monthly Education Review first published in Tanga in 1913 and of the searching questionnaires sent to various schools by the "Hamburgischer Kolonial Institut". There were 83 State schools and 918 Mission schools in German East Africa in 1911 (25), which is more than existed in any other German colony at that time, but considerably more than in any British colony. Moshi District was no exception, as can be seen by the figures already given for pupils enrolled in the Mission schools. There was also a Government Central School at Tanga, which took in some of the more promising Wachagga and taught German to potential clerks and various trades to potential artisans. Mr. Philipo Njau says that the Government gave no regular grants to Mission schools but often awarded prizes. He can remember the Governor giving a special present of books to his school and the local administration financing an educational visit to the port of Tanga.

Professor Becker (26) goes further than either Steer or the British Administration in praising the practical manifestations of German policy and claims that the German Government and German Missions, working closely together, had before the outbreak of the 1914–18 war, evolved ideas and principles that did not become prominent in the British colonies until 1925. In their work in Moshi District we can certainly trace a realization of the need for education rather than instruction, and for intellectual development rather than book learning, a desire to relate the village school closely to the village community and an insistence that the efforts of private institutions must be encouraged and co-ordinated by the State. Yet a vital difference lay in the emphasis on "nativization" rather than "civilization". When this was urged in the early days by the Social Democrats who supported Dernburg or later by the local missionary, Gutmann, whose writings in many ways seemed to complement the official utterances of Sir Donald Cameron, this emphasis that natives must remain natives appears healthy enough: but in the eyes of the German Government, Imperial or Nazi, one suspects that it really meant something different, something closer to "apartheid" than to Indirect Rule. Training had to be emotional rather than intellectual, and to result in a burning desire for racial purity. Agriculture, handicrafts and physical training, within this emotional atmosphere, must "ensure a race of men tribally self-conscious, tribally vigorous and tribally qualified to produce materials for the white world as well as necessary food for their own world." (24).

In September, 1920, the British Government appointed Mr. Rivers Smith Director of Education. His first task was to locate the German-trained teachers who had given up work and had scattered abroad in the previous years of confusion. On these foundations was built up a new system which has gained so much momentum during the last five years.

WORKS CONSULTED

1. Johannes Rebmann. "Journey to the Jagga" in Krapf's *Travels in Eastern Africa.* (English translation). Kornthal, 1858.
2. *Moshi District Book.* (Data compiled by officials in the District Commissioner's office).
3. Charles Dundas. *Kilimanjaro and its Peoples.* London, 1924.
4. Monseigneur A. Le Roy. *Au Kilimandjaro.* Paris, 1914.
5. Joseph Thomson. *Through Masailand.* London, 1885.
6. O. F. Raum. *Chagga Childhood.* Oxford, 1940.
7. B. Gutmann. *The African Standpoint.* "Africa", 1935, p. 1, ff.
8. B. Gutmann. "*Die Stammeslehren der Dschagga.* Munich, 1932–8.
9. Mwitori P. I. Marealle. *Maisha ya Mchagga.* Nairobi, 1951.
10. H. H. Johnson. *The Kilimanjaro Expedition.* London, 1886.
11. D. Julius Richter. *Tanganyika and its Future.* London, 1934. Compare H. S. Scott's article in *Year Book of Education,* 1938.
12. B. Malinowski. *The Dynamics of Culture Change.* Yale, 1945. *Native Education and Culture Contact.* International Review of Missions, 1936.
13. Information on the early period is based on the annual *Evangelisch Lutheritisches Missionsblatt.* Leipzig, 1895 onwards, and typescript. *Die Anfange der Dschaggamission.* Produced in 1936 (Jubilee Year). (With acknowledgments to Dr. R. Reusch).
14. Baron Von Der Decken. *Reisen in Ostafrika.* Leipzig, 1879.
15. Charles New. *Life, Wanderings and Labours in East Africa.* 1873.
16. K. Juhlke. *Die Erwerburg des Kilima-Ndscharo-Gebeits.* 1886.
17. A. C. Hollis. *The Masai.* Oxford, 1905 (see preface).
18. Phelps-Stokes Fund 2nd African Commission. *Education in East Africa.* New York, 1925.
19. Julian Huxley. *Africa View.* Ch. V. London, 1931.
20. *Tanganyika Administration Reports.* (Copy to Permanent Mandates Council), 1920–38.
21. A. Mayhew. "*A German Survey of Colonial Education*". "Overseas Education". January, 1940.
22. Father W. Geillinger. *Der Kilimandscharo.* Bern.
23. *Archives of the Holy Ghost Fathers, Kilema.* (For selection and translation I am extremely grateful to the present Vicar Apostolic, Bishop J. Byrne).
24. G. L. Steer. *Judgment on German Africa.* 1939.
25. For further figures see *Die Deutschen Schutzgebeite.* German Colonial Office, 1910–13.
26. H. T. Becker. *Die Kolonial-Padagogik der Groschen Machte.* Hamburg, 1939.

THE HISTORY AND COINAGE OF THE SULTANS OF KILWA

By Dr. J. Walker and Dr. G. S. P. Freeman-Grenville

Reprinted in this Journal by the kind permission of the Council of the Royal Numismatic Society. Dr. Walker's article "The History and Coinage of the Sultans of Kilwa" first appeared in the Numismatic Chronicle 1936, and was followed by a supplementary article published in the Numismatic Chronicle 1939. Mr. Freeman-Grenville's article on the Coins of the Sultans of Kilwa in the King George V Museum was published in the Numismatic Chronicle, 1954.]

Two large hoards of bronze coins from East Africa issued about the fourteenth and fifteenth century by Moslem princes, presumably of the Dynasty of Kilwa, have recently been examined by the present writer and a representative selection has been made and presented to the British Museum at the generous request of the respective owners. Hoard A is the property of Norman King, Esq., C.M.G., H.B.M. Consul General at Barcelona, and formerly H.B.M. Consul for German East Africa. Hoard B is owned by J. S. Last, Esq. The National Collection already possessed a few specimens of the coins of four of these rulers, but a study of these two hoards has enabled the present writer to decipher the names of five more, thus making a total of nine rulers in all, although Zambaur[1] records only three known to him, whose coins have so far been preserved. The extent, therefore, to which these two coin hoards cast new light on this obscure Moslem Dynasty may be gathered from the following lists:

Zambaur.	*Coins.*
	(Hoard A)
	1. *al-Ḥasan ibn Ṭālūt.*
	2. *Sulaimān ibn al-Ḥusain.*
	3. *Dā'ūd ibn al-Ḥasan.*
	4. *Dā'ūd ibn Sulaimān.*
1. 'Alī ibn al-Ḥasan.	5. 'Alī ibn al-Ḥasan.
2. Sulaimān ibn al-Ḥasan.	6. Sulaimān ibn al-Ḥasan.
3. al-Ḥasan ibn Sulaimān.	7. al-Ḥasan ibn Sulaimān.
	(Hoard B)
	8. *al-Ḥusain ibn Aḥmad.*
	9. *Isḥāḳ ibn Ḥasan.*

In no case do the two hoards overlap. While, for reasons given below, the coins of Hoard A are almost certainly to be ascribed to Kilwa, those of Hoard B, on the other hand, can only be tentatively apportioned to the same locality by analogy of legend structure and approximate provenance. In all cases the coins are published for the first time.

[1] *Manuel de Chronologie*, p. 309.

HOARD A.

The contents grouped according to their numerical representation in the hoard, are as follows:

1. al-Ḥasan ibn Ṭālūt	3
2. Sulaimān ibn al-Ḥusain	7
3. Dā'ūd ibn al-Ḥasan	96
4. Dā'ūd ibn Sulaimān	206
5. Sulaimān ibn al-Ḥasan	519
6. 'Alī ibn al-Ḥasan	940
7. al-Ḥasan ibn Sulaimān	1,791
Uncertain (Kilwa type)	91
Foreign (Moslem)	5
Glass weights	3
Total ...	3,661

Presumably Hoard A was made during the reign of al-Ḥasan ibn Sulaimān, in view of the fact that his coins in several varieties predominate, and also because on his coins only do we find the appearance of a particular formula (عز نصره), which is of late usage in Moslem numismatics. To what extent this agrees with the historical data which we possess concerning the Dynasty of Kilwa will be seen when we come to consider that matter. With regard to the provenance of Hoard A, their finder writes (in a private letter dated 29th Oct. 1935): "*When the German post at Kilindoni, just north of Kissiwani, was captured in January 1915, a box of old coins was thrown away, presumably by the Askaris. I noticed some of the coins lying about and proceeded to rescue all I could. The natives told us that the coins had been collected by the Germans, and I think they came from Kissiwani.*"[2]

In East Africa Kilwa (كلوة) is a common place-name,[3] being applied either alone or in compound form to about half a dozen different towns and islands. The one which concerns us here is *Kilwa Kisiwānī*, a seaport situated on a small island (8°58′ S.), 150 miles south of Dar es Salaam, or some 200 miles south of Zanzibar. Formerly in German East Africa, it is now in Tanganyika Territory. On the island can still be seen the vestiges of former Arab settlements, where the members of the Kilwa Dynasty had their capital. Burton, who visited the place in 1857, thus describes the ruins:

[2] This is Kissiwani on the island of Mafia which was one of the dependencies of the Sultans of Kilwa.

[3] See article *Kilwa* by the present writer in the Supplement to the *Encyclopaedia of Islām*.

"The most remarkable are the remnants of the Nabháni Mosque, which blackened and decayed, represents the 366 of Kilwa Island in her day of pride: the well-cut gateway, the Mihrab decorated with Persian tiles, and the vestiges of ghaut-steps, and masonry lining the shore, showed a considerable amount of civilization. Around it lay the tombs of the Shirazi Shaykhs . . . strewed with small water-washed pebbles."[4]

The mention of *Shirazi Shaykhs* in the above extract refers to the tradition that the Moslem Dynasty of Kilwa was founded by certain Persian émigrés from Shīrāz[5] somewhere about the latter half of the tenth century A.D. Our knowledge of the subsequent history of Kilwa is derivable from two sources: (*a*) the Portuguese account, based on a contemporary Chronicle of the Kings of Kilwa (*Chronica dos Reys de Quiloa*), recorded in the *Asia* of De Barros[6] and (*b*) a modern, and apparently unique, Arabic MS. in the British Museum (Or. 2666). The latter was edited with notes and a résumé by S. Arthur Strong in the *Journal of the Royal Asiatic Society* (1895, pp. 385–430). The subjoined comparative table and approximate genealogy of the rulers of Kilwa have been prepared by the present writer from the above two sources. In this he has employed the 1552 Lisbon edition of De Barros, and the original Arabic MS. of the Arabic Chronicle. While the two sources will thus be seen to supplement one another, one outstanding fact emerges from the collation, namely, that there are serious gaps in the Arabic text. This is perhaps not surprising considering that it is a quite modern MS. written as recently as A.H. 1294 (A.D. 1877), although, no doubt, it is a compilation from some much older document similar to that utilized by the Portuguese pioneers, who landed on Kilwa Island in the wake of Admiral Vasco da Gama. Sir John Kirk, who received the Arabic MS. from the Sultan of Zanzibar in 1877, the year when it was transcribed, presented it to the British Museum in 1883. Before doing so, he wrote on the fly-leaf these words, descriptive of its contents: "*Notes on the History of Kilwa by Sheikh Moheddin of Zanzibar 1862. From arrival of Persians to Portuguese Conquest.*" Sheikh Moheddin (*Muḥyi-l-Dīn*) must of course be understood to have been merely the compiler of the work, since the original author, we are told,[7] was born in the year 904 (i.e. A.D. 1498),

[4] *Zanzibar*, vol. ii, pp. 358–9. There are two interesting photographs of Kilwa ruins in Justus Strandes: *Die Portugiesenzeit von Deutsch- und Englisch-Ostafrika*, Berlin 1899, pp. 86 and 88; see also, incidentally, the article on *Mafia* (in the *Geographical Journal*, August 1917) by Norman King, the owner and finder of Hoard A, for another photograph.

[5] Whether this was the Persian Shīrāz, or some other place of the same name, has been called in question. See C. H. Becker's article: *Materialien zur Kenntnis des Islams in Deutsch-Ostafrika* in *Der Islam*, vol. ii, p. 9. (*Ob sie wirklich persisch war, scheint mir zweifelhaft. Der Name Schirāzī darf uns nicht irreführen.*)

[6] *Asia de Joam de Barros*, Lisbon, 1552–1553, I, viii, cap. iv ff.

[7] p. 16. We are also informed (p. 2v.) that he entitled his work *Kitāb al-Sulwa fi Akhbār Kilwa* (The Book of Pleasure concerning the History of Kilwa), a fact which is overlooked by Strong in his edition. The nameless author of the book might have told us a great deal more than he does, but he was apparently overwhelmed by the "dread of prolixity" (خوف التطويل).

during the reign of al-Fuḍail the forty-fourth ruler of Kilwa. Fortunately, in addition to these two literary sources, the coins supply us with useful supplementary and corroborative evidence, which has the distinct advantage as well of being contemporary.

Ibn Baṭṭūṭa, the celebrated Moslem traveller, who visited the place about A.D. 1332, spells the name *Kulwā* (كلوا).[8] When he stayed there, the Sultan was Ḥasan ibn Sulaimān (no. 21) [circa 718–742=A.D. 1318–1341], who was given the sobriquet of *Abu'l-Mawāhib*, i.e. "*The Father of Gifts*", on account of his great public generosity, particularly towards men of religion. Ibn Baṭṭūṭa also tells us that Ḥasan was succeeded by his brother Dā'ūd, a fact which corresponds with the Kilwa Chronicles (nos. 20 and 22). This Dā'ūd, some of whose coins are included in the Hoard, was (according to Ibn Baṭṭūṭa) the antithesis of his brother, being as parsimonious as the latter had been liberal.

THE SULTANS OF KILWA.[9]

De Barros.	Arabic Chronicle.
Solta Hocen from Shīrāz (Xiraz)	*Ḥasan* ibn 'Alī, Sultan of Shīrāz, migrated with his six sons to the African coastland.
Ale (his son) came to Kilwa (Quiloa). 1. *Ale Bumale* (his son) reigned 40 years; no sons(?)	'*Alī* ibn Ḥusain ibn 'Alī reigned 40 years; sur-named اغرميج (=?ابو مليح=? Bumale?); went to Manfia منفية= Mafia),[10] where his sons afterwards ruled, (*a*) Muḥammad (2½ years) (*b*) Basḥat (4½ years).

[8] (بضم الكاف, واسكان اللام, وفتح الواو). See edition by Defrémery and Sanguinetti, ii, p. 192; Yāḳūt, however, spells it as Kilwa (كلوة) [*Mu'jam al-Buldān*, s.v.]. Cf. Ibn Baṭṭūṭa's pronunciation with that of the author of the Arabic Chronicle (see preceding footnote) which was probably *Kulwa* to rhyme with *sulwa*.

[9] The author of the Arabic Chronicle of Kilwa gives the rulers the title of Sultan (السلطان), although it does not occur anywhere on their coins.

[10] Not Mombasa (منبسة) as believed by Strong, *op. cit.*, p. 399, following a gloss in the Arabic text (p. 7v.). This mistake is repeated by Conte Rossini in *Atti del Terzo Congresso Geogr. Italiano*, Florence, 1899, ii, p. 493. On the same page he also makes the Sultan migrate with *seven* inste ad of with *six* sons. There were actually seven ships in all, but one was in the c\ arge of the Sultan himself. It is in the different version recorded in the *Portuguese Chronicle* that mention is made of *seven* sons.

2. *Ale Busoloquete*
reigned 4½ years; son of a brother(?) in Mofia (=Mafia).

'Alī ibn Bashat (ibn 'Alī)
reigned 4½ years; ruled over his uncles:
(*a*) Sulaimān ibn 'Alī
(*b*) Ḥasan ibn 'Alī
(*c*) Dā'ūd ibn 'Alī (=no. 3)

3. *Daut* (son of Ale)
reigned 4 years; driven out by invader Matáta Madelina, king of Shāga (*rey de Xága*); died in exile in Mofia (Mafia).

Dā'ūd ibn 'Alī
reigned 2 years; retired to Mafia to visit his father's grave; remained there and handed over Kilwa to his son 'Alī ibn Dā'ūd (see De Barros. nos. 6 and 7).

4. *Ale Bonebaquer* (usurper)
reigned 2 years; nephew of the invader Matáta; driven out by the people of Kilwa.

Khālid ibn Bakr (usurper)
reigned 2½ years; appointed ruler by the invaders al-Matamandalīn(?) المتمندلين "the people of Shāgh" (اهل شاغ) (cf. De Barros, no. 3); driven out by the people of Kilwa.

5. *Hocen Soleiman*
reigned 16 years (nephew of Daut).

Ḥasan ibn Sulaimān (ibn 'Alī)
reigned 12 years; another invasion of المتمندلين, Ḥasan fled to Zanzibar; the invaders appointed an Amīr named Muḥammad ibn Ḥusain al-Mundhirī to govern Kilwa.

Ḥasan ibn Sulaimān (restored)
reigned 14 years.

6. *Ale bem Daut*
reigned 60 years (*sic*), nephew

See no. 3.

7. *Ale* (bem Daut)
reigned 6 years (nephew); deposed by the populace; cast into a well.

8. *Hacen ben Daut* (his brother)
reigned 24 years.

Ḥasan ibn Dā'ūd (ibn 'Alī)
reigned 70 years (*sic*).

9. *Soleiman*
(of the blood royal); reigned 2 years; a tyrant; killed by his subjects.

[There is obviously a distinct break in the Arabic text at this point, as can be seen from a comparison with the Portuguese version. The lacuna occurs at the end of the second chapter (الباب الثاني).]

10. *Daut* (his son)
reigned 40 years; trade with Sofāla.

11. *Soleiman Hacen* (his son) reigned 18 years; conquered a great part of the coastal region (Lord of Sofāla and of the islands of Pemba, Mafia, and Zanzibar); built a fortress at Kilwa.	
12. *Daut* (his son) reigned 2 years.	
13. *Talut* (his brother) reigned 1 year.	
14. *Hacen* (his brother) reigned 25 years; no children.	
15. *Hale bonij* (his brother) reigned 10 years; the luckiest member of the dynasty.	
16. *Bone Soleiman* (his nephew) reigned 40 years.	
17. *Ale Daut* reigned 14 years.	
18. *Hacen* (his grandson) reigned 18 years; a most excellent horseman.	*Ḥasan* ibn Ṭālūt reigned 18 years; took Kilwa by force.

Coins (see p. 47).

19. *Soleiman* (his son) reigned 14 years; killed outside the mosque.	Missing.

Coins: Sulaimān ibn al-Ḥasan (see p. 48).

20. *Daut* (his son) reigned, firstly, for 2 years, during the absence of his brother Hacen who had gone to Mecca.	See no. 22.

Coins (see p. 49).

21. *Hacen* (his brother) reigned 24 years.	*Ḥasan* ibn Sulaimān ibn Ḥasan ibn Ṭālūt reigned 14 years; named *Abu'l-Mawāhib;* went to Mecca; studied spiritual science (العلم الروحانى) at Aden.

22. *Daut* (his brother) reigned 24 years (second reign).

Dā'ūd ibn Sulaimān reigned 24 days (*sic*) [perhaps confused with his son who only reigned 20 days]; regent during the absence of his brother Ḥasan in Arabia; a pious ruler.

Coins (see p. 49).

23. *Soleiman* (his son) reigned 20 days; the kingdom seized by his uncle Hacen.

Missing.

24. *Hacen* (his uncle) reigned 6½ years.

Ḥusain ibn Sulaimān reigned 6½ years; died a martyr (شهيد) in a Holy War (جهاد) against the infidels of the mainland.

25. *Taluf* [*sic*] (his nephew [?], brother of the foregoing Soleiman) reigned 1 year.

Ṭālūt ibn Ḥusain reigned 2 years 4 months and 14 days; left on pilgrimage to Mecca, but died on the way.

24. Ḥusain

25. Ṭālūt — 26. Sulaimān

26. *Soleiman* (his brother) reigned 2 years and 4 months; driven out by his uncle Soleiman.

Missing.

Coins: Sulaimān ibn al-Ḥusain (see p. 50).

27. *Soleiman* (his uncle) reigned 24 years 4 months and 20 days.

Missing.

28. *Hacen* (his son) reigned 24 years.

Ḥusain ibn Sulaimān reigned 23 years; went on pilgrimage to Mecca safely (the fact that the Arabic text proceeds as if he were the son of Ṭālūt is a clear indication that certain lines have been dropped out).

29. *Mahamed Ladil* (his brother) reigned 9 years.

Muḥammad ibn Sulaimān reigned 22 years; called *al-Malik al-'Ādil* (=*Ladil*)
Wazīr: Sulaimān
Amīr: Muḥammad ibn Sulaimān
[The length of his reign probably belongs to his successor.]

30. *Soleiman* (his son) reigned 22 years; no sons(?).	*Sulaimān* ibn Muḥammad length of reign not stated; mosque rebuilt that was in ruins in the days of Ḥasan ibn Sulaimān (21), expenditure 1,000 mithḳāls[11] of gold. Amīr: Muḥammad, who tried to get the throne.
31. *Ismael Ben Hace* (his uncle?) reigned 14 years.	*Ismā'īl ibn Ḥusain* (ibn Sulaimān) reigned 13 years. Wazīr: Sulaimān Amīr: Muḥammad ibn Sulaimān. During this reign Sa'īd ibn Ḥasan (no. 36) rebelled, and sought help from Ḥasan ibn Abī Bakr, the Sultan of Zanzibar; though unsuccessful, he was pardoned by Ismā'īl.
32. The Governor made Sultan for 1 year.	The Governor (Amīr) Muḥammad made Sultan for 1 year. Wazīr: (*a*) Sulaimān; then (*b*) Sa'īd (=no. 36). Amīr: Sulaimān ibn Muḥammed (=no. 37) his son.
33. The Governor made Sultan for 1 year [?].	
34. *Mamud* (a poor man but of royal blood) reigned for 1 year.	*Aḥmad* ibn Sulaimān reigned for 1 year. Wazīr: Sa'īd (=no. 36). Amīr: Sulaimān ibn Muḥammad (=no. 37).
35. *Hace* (son of Ismael) reigned 10 years.	*Ḥasan* ibn Ismā'īl reigned 10 years. Wazīr: Sa'īd (=no. 36). Amīr: Sulaimān (=no. 37).
36. *Zayde* (his son) reigned 10 years.	*Sa'īd* (ibn Ḥasan) During the reign of Sa'īd, the Rasūlid Prince Mas'ūd of Arabia, expelled from Aden by 'Alī ibn Ṭāhir (*c.* A.H. 858=A.D. 1454) arrived at Kilwa on a visit.

[11] It is permissible to deduce from this statement that there were no *dīnārs*, or gold coins, struck by the Sultans of Kilwa, although they had the resources of the gold region of Sofāla at their command. Ibn Baṭṭūṭa (*op. cit.*, ii, p. 195) mentions the fact that "*the majority of the presents in this country consists of ivory; they rarely give gold*"; apparently, the "precious" metal was too commonplace.

37. The Governor becomes Sultan for 1 year.
Amīr: Mamude (his brother) who had three sons, whom he sent off to official posts in the outlying dominions of Kilwa; one of them, Içuf (i.e. Yūsuf) governed Sofāla at the time when the Portuguese came.

The Governor (Amīr) Sulaimān ibn Muḥammad becomes Sultan for 1½ years.
Amīr: Muḥammad (his brother).

38. *Habedála* (brother of Zayde)[12] reigned 1½ years.

'Abdallah ibn Ḥasan reigned 1½ years.
Wazīr: Ḥasan ibn Sulaimān.
Amīr: Muḥammad Kiwāb.

39. *Ale* (his brother) reigned 1½ years.

'Ali ibn Ḥasan reigned 1½ years.
Wazīr: Ḥasan ibn Sulaimān.
Amīr: Muḥammad Kiwāb.

Coins (see p. 51).

40. *Hace* (son of the Governor who tyrannized the land (i.e. no. 37) length of reign not given (see no. 42).

Ḥasan ibn Sulaimān (son of the Amīr Sulaimān=no. 37).
Amīr: Muḥammad Kiwāb.
Sultan Ḥasan reigned for six years; was deposed by the Amīr Muḥammad (see no. 42).

Coins (see p. 53).

41. *Xubo* (of the blood royal) reigned 1 year.

Sabḥat (ست) reigned 1 year.

De Barros.

42. *Hacen* reigned 5 years (second reign, see no. 40).

Arabic Chronicle.

Ḥasan ibn Sulaimān reigned 5 years (second reign, see no. 40); he was restored by the Amīr Muḥammad and again deposed by him.

Coins (see p. 53).

43. *Habraemo* (son of Solta Mamude) reigned 2 years; afterwards deposed.

Ibrāhīm (ibn al-Malik al-'Ādil) reigned 5 years; the deposed Sultan Ḥasan tried to return, but the Amīr Muḥammad could not

[12] Guillain, see p. 62, n. 16, wrongly makes him his son, and is followed in this by Kersten, see p. 62, n. 17.

manage to restore him, since he was not of royal blood like Ibrāhīm; civil disturbance; great loss of life; Ibrāhīm was deposed by the Amīr Muḥammad, who ruled for a short time himself, before he abdicated and appointed al-Fuḍail (no. 44).

44. *Alfudail* (nephew) had a short reign.

al-Fuḍail ibn Sulaimān began to reign in the year A.H. 901=A.D. 1495/6. The deposed Sultan Ḥasan again created trouble, but was driven out of the kingdom. He retired to مغم غرب (?) where he founded a small principality. [Strong (p. 401) suggests reading مغم غون=Mgongeni=Kilwa Kivinje (8°45′S.]

The Amīr Muḥammad died, after having controlled the country and its Sultans for 15 years. His nephew Ibrāhīm (son of Sultan Sulaimān=no. 37) succeeded him as Amir.

45. *Mir Habraemo*, the real ruler of Kilwa after the death of Alfudail, though he was not called king.

Arrival of the Portuguese:
Pedralvarez Cabral
Joa da Nova
Almirate do Vásco da Gama.

[Habraemo (Ibrāhīm) became vassal of the king of Portugal (in 1502).] Deposed (see no. 49).

Amīr Ibrāhīm, the real ruler of Kilwa.

Arrival of the Portuguese (الافرنج, i.e. the Franks):

906 (A.D. 1500) Don Pedro Alvarez القبيم‌طان بيذرارس arrived with a number of ships.

907 (A.D. 1501) Don Joan de Nova arrived in one ship.

908 (A.D. 1502) Don Vasco da Gama (called المرتى = Almirate) returned.

[Arabic Chronicle ends abruptly.]

46. *Mahamed Anconij*, appointed Sultan by Do Fracisco Dalmeyda (A.D. 1505); murdered at the instigation of the deposed Mir Habraemo.

May be identified with *Muḥammad ibn Rukn al-Dīn al-Dābūlī*, one of the chief men of Kilwa mentioned in the course of the last chapter of the Arabic Chronicle.

47. (*Agi*) *Hocem* (his son) [A.D. 1506] deposed.

Ḥājjī Ḥasan (his son).

48. *Micante* (or *Nycate*), deposed.

Muḥammad *Mikāt* (مكات), (son of the Amīr Kiwāb).

49. *Habraemo* (cousin of Micante), vassal of Portugal [A.D. 1507].	*Ibrāhīm* (restored).
50.	*Sa'īd* (his brother).
51.	Muḥammad (nephew of al-Fuḍail). It was by his command that the Arabic Chronicle was compiled.[13]

In accordance with the historical and genealogical data given on pp. 44-46, the coins of Hoard A are arranged here in chronological order. All the examples described are in the British Museum. As the coins are, for the most part, crude in execution and often considerably defaced, the legends have had to be reconstructed from a comparison of several specimens. Hence, the reconstructions given below are seldom as complete on any one specimen. Nevertheless, as can be seen from the plates, there is no question of the accuracy of the readings.[14]

In every case the name of the ruler, on the obverse, has been fitted with an appropriate rhyme, on the reverse. To indicate this a transliteration of the Arabic is subjoined. The oriental mind is particularly fond of the use of assonance, and although poetic couplets are common on the coins of the Shahs of Persia and the Moghul Emperors of India, the terse rhymes on these coins of Kilwa are quite distinctive in Moslem numismatics, especially in their employment of such rare attributes of Allah as *The Lord of the Kingdom*, *The Master of Bounties*, *The Lord of the Two Creations*, &c. In addition, the majority of the coins bear the legends *sa'ida* (سعد), on the obverse, and *'azza* (عز) on the reverse. These are interpreted in the one case as optative, and in the other as declarative, referring respectively to the Sultan and to Allah. It may be added that one unfortunate feature of these coins is the absence of any mention not only of the mint, but also of the date. As there are sometimes discrepancies in the length of the reigns of the various Sultans recorded in the two literary sources, the chronological data given below must be regarded as largely conjectural. Otto Kersten,[16] following Guillain's[17] résumé of De Barros, calculated the dates of the Kilwa Sultans, but his work appeared

[13] These last six names are preserved in the chapter headings (8, 9 and 10) of the Arabic Chronicle (p. 3 r.), though the work itself abruptly ends towards the close of chapter seven(السابع الباب. The Arabic text punctuates مكات Makātu, but the Portuguese contemporary version would imply a form Mikāt(u), cf. Kiwāb(u), the name of his father. These names were apparently bestowed on father and son to distinguish them from the grandfather who was also Muḥammad.

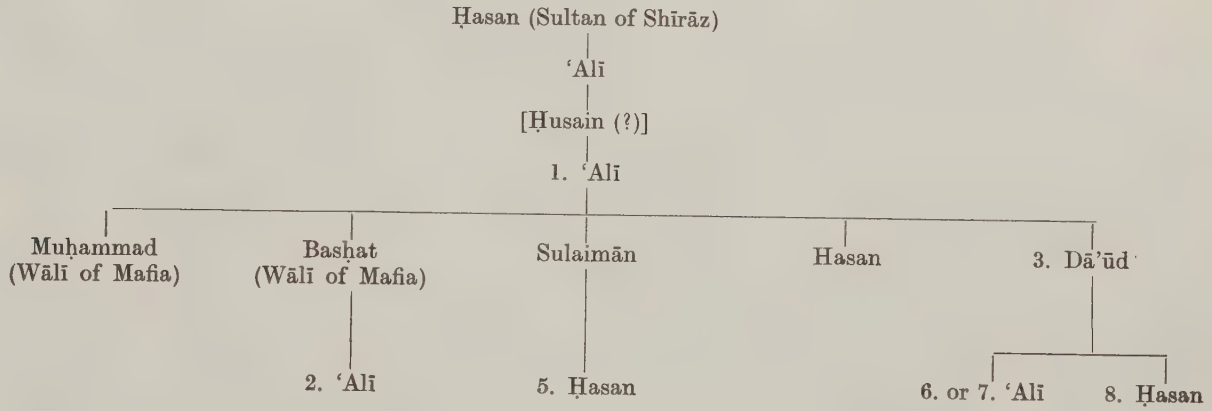
[14] The only doubtful legend occurs in the case of Isḥāḳ ibn Ḥasan, whose coins form part of Hoard B (see below p. 57).

[16] *Tabellarische Uebersicht der Geschichte Ostafrikas*, in vol. iii of Baron Carl Claus von der Decken's *Reisen in Ostafrika*, Leipzig and Heidelberg, 1879 pp. 26-8.

[17] *Documents sur l'histoire, la geographie et le commerce de l'Afrique oriental*, Paris, 1856, Pt. I, pp. 178 ff.

GENEALOGY OF THE SULTANS OF KILWA[15]

A.—THE HOUSE OF 'ALĪ

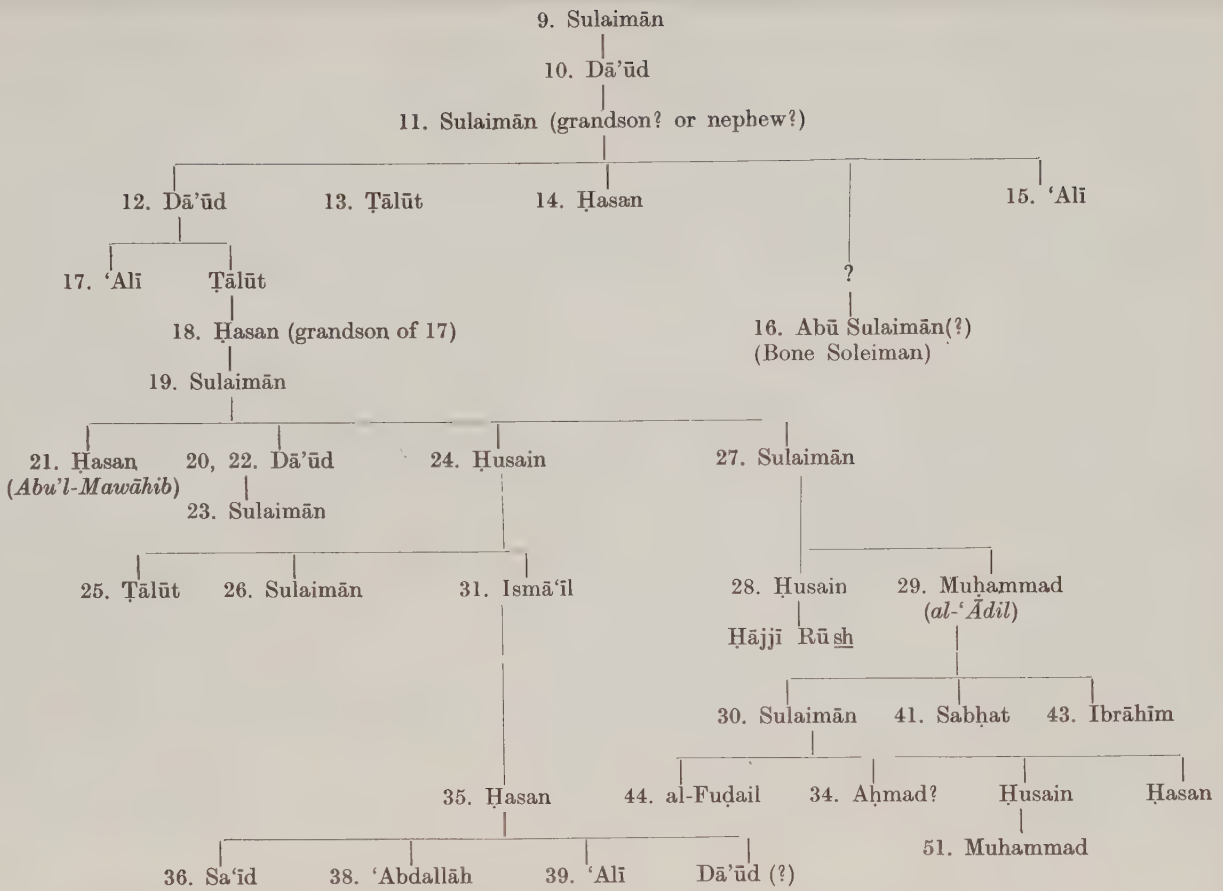


4. Khalid ibn Bakr (usurper).

6. 'Alī ibn Dā'ūd, nephew (?) of No. 5 according to De Barros.

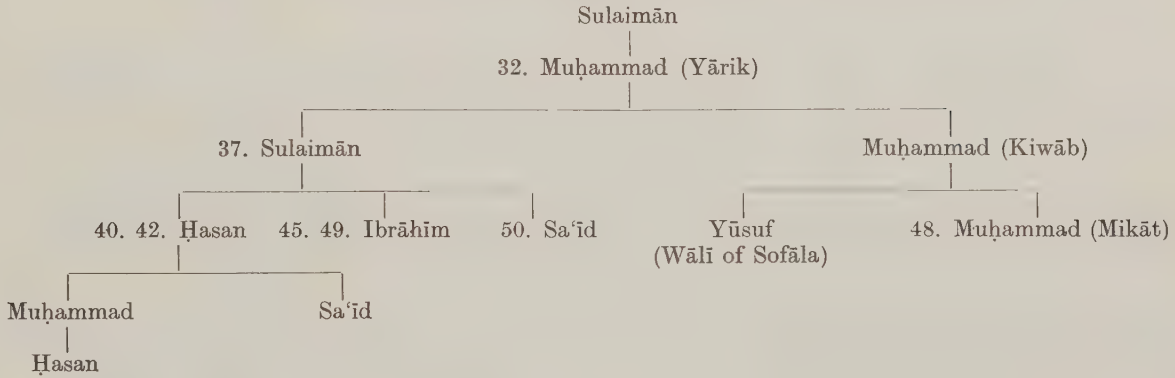
7. 'Alī ibn Dā'ūd, nephew (?) of No. 6 according to De Barros, but cousin of No. 5 according to the Arabic Chronicle.

[15]There are so many contradictions in the Arabic text that the following genealogy can only be considered as a provisional one. Perhaps further research will result in an unravelling of the tangle.



31. Ismā'īl may be the son of some other Husain ibn Sulaimān; De Barros makes him the uncle of No. 30, which he might have been by marriage.

C. THE HOUSE OF THE AMĪRS SULAIMĀN AND MUḤAMMAD



33. Unknown Governor, only authority De Barros; no doubt a case of dittography. Kersten (*op. cit.*, p. 27) omits him, apparently by accident, since he follows Guillain (*op. cit.*, p. 181) who includes him. The fact that the Arabic text has no knowledge of him is strongly in favour of the view that the statement in De Barros is a duplication.

37. Sulaimān had a daughter who was the mother of Sultan Muḥammad (No. 51).

before the Arabic Chronicle was edited (in 1895). The present writer has had the advantage of new material, therefore, in arriving at the approximate dates of the Sultans whose coins are described below. One important *terminus a quo*, furnished by the Arabic MS., is the statement that the Sultan al-Fuḍail began to reign in A.H. 901 (=A.D. 1495 6). As the author of the work himself, as he tells us, was born shortly afterwards in A.H. 904 (=A.D. 1498), it is allowable to regard this date as credibly accurate. Moreover, the statement by Ibn Baṭṭūṭa, quoted above, agrees very well with the dates deducible therefrom.

HOARD A.

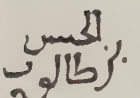
al-Ḥasan ibn Ṭālūt (no. 18)

(الحسن بن طالوت)

circa A.H. 684–702 (A.D. 1285–1302)

I. Æ ·9; wt. 44·4 grs. (2·88 grms.). [Plate One 1.]

Obv. Within circle, with ornamentation in the field and flowing script:



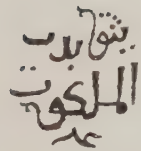
الحسن al-Ḥasan

بن طالوت son of Ṭālūt

سعد (May he be happy)!

Traces of outer circle of dots.

Rev. Within circle, with ornamentation in the field and floriated script:



يثق برب trusts in the Lord

الملكوت of the Kingdom [of Heaven]

عز (He is glorious!)

Traces of outer circle of dots.

Rhyme: *al-Ḥasan ibn Ṭālūt*
*yaṯiḳu bi Rabbi'l-Malak*ūt.

II. Æ ·9; wt. 29·7 grs. (1·92 grms.). [Plate One 2.]

As above; although more obliterated, it nevertheless supplies parts of the legends missing in no. I.

The name of this Sultan's father, Ṭālūt, is of some interest as it is the form used in the Koran for the Biblical King Saul (Koran II, 248), a form purposely built to rhyme with the name of Goliath (or Jālūt) in the same story.[18] It is a very rare name among Moslems, and in the present writer's recollection this is its first appearance on coins. The Kilwa Dynasty seems to have had a partiality for old Biblical names, for not only do we have Saul (Ṭālūt), but also David (Dā'ūd), Solomon (Sulaimān), and, if we include Hoard B, Isaac (Isḥāḳ). Although one might conclude from the other names commonly used by them,

[18] See J. Horovitz: *Koranische Untersuchungen*, s v., and J. Walker: *Bible Characters in the Koran*, pp. 122-3.

and from the (reputed) fact of their Persian origin, that they would be of the Shī'a, or schismatic party, in Islam, who honoured the descendants of the Prophet's son-in-law ('Alī) and the latter's tragic sons (al-Ḥasan and al-Ḥusain), yet Ibn Baṭṭūṭa found them of the Shāfi'ī persuasion,[19] one of the four orthodox schools of Moslem Jurisprudence, and one which is still strong to this day in that region, as well as in South Arabia, Baḥrain, and the Indian Archipelago.

The Portuguese Chronicle has but a brief mention of this Sultan Ḥasan:

ao qual sucedeo Hacen seu néto que reinou dezoito ánnos que foy muy excelente cavaleiro.

There succeeded him Ḥasan, his grandson, who reigned 18 years. He was a most distinguished cavalier.

The Arabic Chronicle, in this respect, supplies us with much more information.

ثم انتقل الملك منهم الى بيت ابي المواهب والذى ولى الامر منهم الحسن بن طالوت المشهور بالولى والشجاعة اخذ الملك بالغلبة مع وجود اهله ولكنهم ضعفوا عن الامر فاستبد بنفسه واخذ المملكة قهرا وقسرا وكانت مدة ولايته ثمانية عشر سنة ثم مات[20]

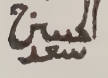
Thereupon the kingdom was transferred from them (see *Genealogy*) to the House of Abu'l-Mawāhib. The one who took over the control from them was al-Ḥasan ibn Ṭālūt, who was renowned for mentality and fortitude. He seized the kingdom by force along with his people, but they were unequal to the government, so he became independent and seized the kingdom by violence. The length of his reign was 18 years. Then he died.

Sulaimān ibn al-Ḥasan (no. 19).
(سليمان بن الحسن)

circa A.H. 702–716; (A.D. 1302–1316).

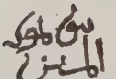
III. Æ ·9; wt. 36·9 grs. (2·39 grms.). [Plate One 3.]

Obv. Within double circle, with star in centre of the field:



سليمان بن Sulaimān son of
الحسن al-Ḥasan
سعد (May he be happy!)

Rev. Within double circle, with star in centre of the field:



يثق بمولى trusts in the Master
المنن of Bounties.
عز (He is glorious!)

Rhyme: *Sulaimān ibn al-Ḥasan*
yaṯiḳu bi Maula'l-Minan.

IV. Æ ·9; wt. 39·3 grs. (2·55 grms.). [Plate One 4.]

Obv. and *rev.* as above, with the exception of points.

[19] *Ibid.*, ii, p. 193 (وهم شافعية المذهب).

[20] B.M. Or. 2666 p. 8 v.

V. Æ ·95; wt. 35·8 grs. (2·32 grms.).

Obv. As above, but legend:

سليمان | بن الحسن | سعد

Rev. As above; large eight-pointed star in centre, and additional points in the field.

The Arabic Chronicle, in this case, actually fails to record the reign of this Sultan, and states that after the death of Ḥasan ibn Ṭālūt "*there reigned after him Abu'l-Mawāhib al-Ḥasan son of Sulaimān (al-Maṭ'ūn) son of Ḥasan son of Ṭālūt*" (فتولى بعده ابو المواهب الحسن بن سليمان المطعون بن حسن بن طالوت)[21].

This statement does, however, preserve for us the Sultan's sobriquet of al-Maṭ'ūn "*the Accursed*".[22] The Portuguese Chronicle, on the other hand, supplies the true tradition, which is corroborated by the coins, as follows:

per sua morte ficou no reino seu filho Soleiman que foy morto em saindo da mesquita per traiçam, avendo quatorze anos q reynáva.

through his death his son Sulaimān was made king. He was killed coming out of the mosque by treachery, having reigned for 14 years.

The Arabic Chronicle, nevertheless, does contain an allusion later on to Sulaimān's tragic end, in the following passage:—

فلما استقر له الامر اخذ ثار ابيه من اهل منفسة (*sic*) فحاربهم وغلبهم على البلاد وهو اول من ملك منفسة استقلالا الى زماننا هذا (*sic*) (p. 9 r.)

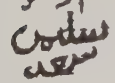
Then when he (i.e. Ḥasan ibn Sulaimān, no. 21) became firmly established in the government, he took revenge for his father from the people of Mafia (منفسة for منفية). He warred against them and subdued their territory. And he was the first one to rule Mafia with absolute power until our time.

Dā'ūd ibn Sulaimān (nos. 20 and 22).
(داود بن سليمان)

circa A.H. 716–718; A.D. 1316–1318 (first reign).
circa A.H. 742–766; A.D. 1341–1364 (second reign).

VI. Æ ·9; wt. 33·1 grs. (2·15 grms.). [Plate One 5.]

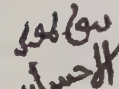
Obv. Within double circle:



داود بن — Dā'ūd son of
(*sic*) سليمن — Sulaimān.
سعد — (May he be happy!)

In centre of the field ∴.

Rev. Within double circle:



يثق بمولى — trusts in the Master
الاحسان — of Beneficence.
عز — (He is glorious!)

In centre of the field +

Rhyme: *Dā'ūd ibn Sulaimān*
yaṯiḳu bi Maula'l-Iḥsān.

[21] p. 8 v.

[22] Literally, "*pierced with a lance*", which no doubt refers to his assassination.

VII. Æ ·95; wt. 36·1 grs. (2·34 grms.). [Plate One 6.]
Obv. As above, but in centre of the field +
Rev. As above, but without + in centre of the field.

VIII. Æ ·85; wt. 32·5 grs. (2·11 grms.).
Obv. As above, but in centre of the field *
Rev. As above, but in centre of the field ÷

IX. Æ ·95; wt. 43 grs. (2·78 grms.).
Obv. As above, but Sulaimān written سليمان ; no mint-mark in centre of the field.
Rev. As above, but without mint-mark.

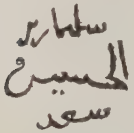
X. Æ ·9; wt. 43·1 grs. (2·79 grms.).
Obv. As above.
Rev. As above, but first line لى / يثق بمر

From both the Portuguese and the Arabic Chronicles we can gather that Dā'ūd's first reign, or, more correctly, regency, was during the absence of his brother Ḥasan, who had gone to the Ḥijāz on pilgrimage and for purposes of study.[23] The Arabic Chronicle is, in fact, fuller in detail regarding this period, but, unfortunately, the present text is defective in the middle of the narrative. There is one flagrant discrepancy, too, between the Portuguese and the Arabic accounts; while the former gives Dā'ūd's second reign as lasting for 24 years, the latter has it lasting only for so many days (عشرين يوما). The probability is that the mistake has arisen in the Arabic transcription.

The Arabic Chronicle adds the information that Sultan Dā'ūd was zealous and pious and "*the master of the princes of his time*" (p. 9v. صاحب البراهين في زمانه). The reference made by Ibn Baṭṭūṭa to this Sultan, which does not quite tally with this statement, has already been mentioned above (p. 36).

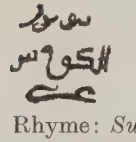
Sulaimān ibn al-Ḥusain (no. 26).
(سليمان بن الحسين)
circa A.H. 774–776; A.D. 1372–1374

XI. Æ ·85; wt. 33·2 grs. (2·15 grms.). [Plate One 7.]
Obv. Within double circle, in flowing script:



سليمان بن Sulaimān son of
الحسين al-Ḥusain.
سعد (May he be happy !)

Rev. Within double circle, in flowing script:



يثق برب trusts in the Lord of
الكونين the Two Creations.
عز (He is glorious !)

Rhyme: *Sulaimān ibn al-Ḥusain*
ya thiku bi Rabbi'l-Kaunain.

[23] "*in the time of his accursed parent*" (فى زمان والده المطعون) adds the Arabic Cronicle (p. 9 v.).

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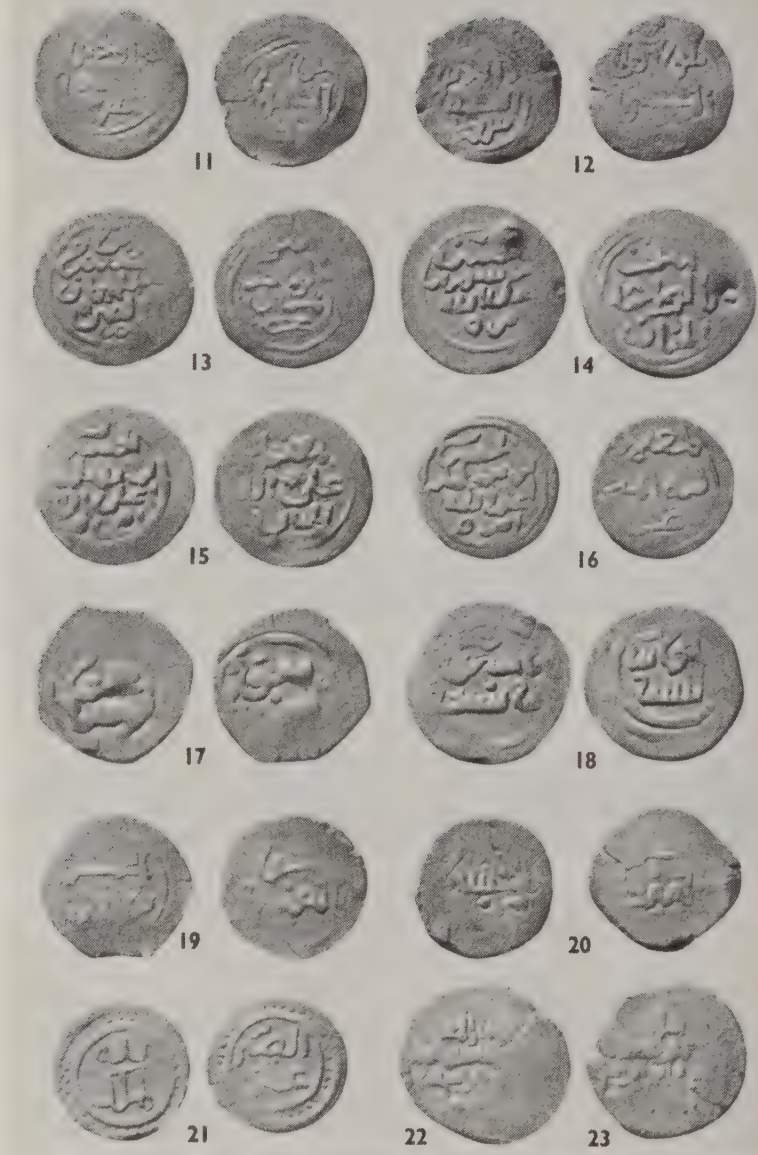
11
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The rare description of Allah as *Rabb al-Kaunain* corresponds to the Koranic phrase *Rabb al-'Ālamīn*, Lord of Eternity (usually rendered Lord of the Two Worlds). The Dual Creations (الكونين) are the natural and the supernatural worlds of God.[24]

Here, once more, we find a lacuna in the Arabic Chronicle, which is, however, filled by the Portuguese Chronicle and substantiated by numismatic evidence. The Portuguese account tells us that after *Taluf* (obviously an error for Ṭālūt) [no. 25] there reigned (for two years and four months) his brother called *Soleiman* [no. 26]. The Arabic Chronicle tells us that Ṭālūt was the son of Ḥusain and was succeeded in his turn by his son Ḥusain ibn Sulaimān. This latter statement is palpably absurd. Clearly there is some confusion in the text. But by combining the two accounts we can deduce the following fact, that no. 26 must be Sulaimān son of Ḥusain, and, presumably, the Sultan of these coins; thus:

24. Ḥusain

25. Ṭālūt — 26. Sulaimān

The fact that he had such a short reign may partly account for the scarcity of his coins in the hoard compared with the case of his predecessors.

'Alī ibn al-Ḥasan (no. 39).

(علي بن الحسن)

circa A.H. 885–887; A.D. 1480–1482.

XII. Æ ·9; wt. 33·6 grs. (2·18 grms.). [Plate One 8.]
Obv. Within double circle:

علي بن الحسن 'Alī son of al-Ḥasan.
سعد (May he be happy!)

Rev. Within double circle, and with crescent at top and eight-pointed star in the field:

يثق بمولى المنن
trusts in the Master of Bounties.

Rhyme: *'Alī ibn al-Ḥasan*
yathiḳu bi Maula'l-Minan.

[24] For the use of كن as the supernatural, invisible treasure of Allah, see Dozy: *Supplément aux dictionnaires arabes*, ii. p. 502.

XIII. Æ ·85; wt. 22·9 grs. (1·48 grms.). [Plate One 9.]

Obv. Within double circle (in three lines):

سعد | الحسن | على بن

Rev. Within double circle, with star in centre of the field (in two lines):

المنن | يثق بمولى

XIV. Æ ·75; wt. 18·4 grs. (1·19 grms.). [Plate One 10.]

Obv. Within double circle, with six-pointed star in centre; legend as above, but without سعد [small flan].

Rev. Within double circle, legend as above, but star replaced by ن·

The accounts given by the two Chronicles regarding this Sultan are both brief and in agreement, though the Arabic one does give a few more details, as follows:

ثم تولى بعده اخوه على بن الخطيب حسن ووزيره الحسن بن سليمان واميره المذكور [محمد كواب] ومدة ولايته سنة ونصف [25]

Thereupon there ruled after him (i.e. 'Abdallah, no. 38) his brother 'Alī son of the Preacher (الخطيب) Ḥasan; and his Vizier was al-Ḥasan ibn Sulaimān and his Amīr was the aforementioned (Muḥammad Kiwāb). The length of his reign was a year and a half.

Dā'ūd ibn al-Ḥasan

(داود بن الحسن)

circa A.D. 1460 (?).

XV. Æ ·9; wt. 28·8 grs. (1·87 grms.). [Plate Two 11.]

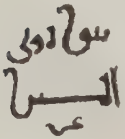
Obv. Within double circle:

داود بن — Dā'ūd son

الحسن — of al-Ḥasan.

سعد — (May he be happy!)

Rev. Within double circle:



يثق بمولى — trusts in the Master

المنن — of Bounties.

عز — (He is glorious!)

Traces of star in centre of the field.

Rhyme: *Dā'ūd ibn al-Ḥasan*
yaṯḥiḳu bi Maula'l-Minan.

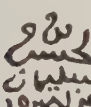
[25] Strong has نسف by mistake (p. 423).

XVI. Æ ·85; wt. 26·3 grs. (1·70 grms.). [Plate Two 12.]
Obv. and *rev.* similar to the above.

Of all the Sultans of Kilwa whose coins survived in Hoard A, Dā'ūd ibn al-Ḥasan is the only one who does not seem to figure in the Kilwa Chronicles. Presumably he was a brother of 'Ali ibn al-Ḥasan (no. 39), since the coin style bears a marked resemblance in the two cases. In consequence, he has been included as such in the genealogical table.

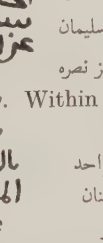
al-Ḥasan ibn Sulaimān (nos. 40 and 42).
(الحسن بن سليمان)
circa A.H. 887–893; A.D. 1482–1487 (first reign).
circa A.H. 894–899; A.D. 1488–1493 (second reign).

XVII. Æ ·9; wt. 36·9 grs. (2·39 grms.). [Plate Two 13.]
Obv. Within double circle:



بن الحسن — al-Ḥasan son of
سليمان — Sulaimān.
عز نصره — (May his victory be glorious!)

Rev. Within double circle:

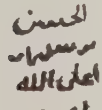


يثق — trusts
بالواحد — in the One (God),
المنان — the Bountiful.
عز — (He is glorious!)

Rhyme: *al-Ḥasan ibn Sulai*man
*yathiku bi'l-Wāḥid al-Man*nān.

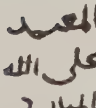
XVIII. Æ ·9; wt. 38·9 grs. (2·52 grms.).
Obv. As above.
Rev. As above, but without عز

XIX. Æ ·9; wt. 39 grs. (2·52 grms.). [Plate Two 15.]
Obv. Within circle, with 7 at top:



الحسن — al-Ḥasan
بن سليمان — son of Sulaimān.
اعلى الله — (May Allah exalt
امره — his government!)

Rev. Within circle, with star in centre of the field:



المعتمد — relying
على الله — upon Allah
المنان — the Bountiful.

Rhyme: *al-Ḥasan ibn Sulai*mān
*al-Mu'tamid 'ala'llāh al-Man*nān.

XX. Æ ·95; wt. 38·1 grs. (2·47 grms.).
Obv. As above.
Rev. As above, but without star.

XXI. Æ ·85; wt. 38 grs. (2·46 grms.). [Plate Two 16.]
Obv. As above.
Rev. As above, but legend:

المعتمد [على
الله المنا]ن
عز

XXII. Æ 1; wt. 40·9 grs. (2·65 grms.). [Plate Two 14.]
Obv. As no. XIX [pierced].
Rev. As no. XVIII.

XXIII. Æ ·9; wt. 30·7 grs. (1·99 grms.).

Obv. (In three lines): عز نصره | بن سليمان | الحسن
Ornament at top.

Rev. As above, but with outer circle of dots.

XXIV. Æ ·85; wt. 24·7 grs. (1·60 grms.).
Obv. As no. XVII.
Rev. Legend:

يثق	trusts
بالواحد	in the One (God)
المنان عز	the Bountiful. (May His
نصره	victory be glorious!)

It might be asked why these coins should be ascribed to this particular Sultan, instead of to his predecessor of the same name (no. 21). The answer is that the majority of them bear the new legend "*May his victory be glorious*" (عز نصره), which we already know, from other evidence, was a numismatic formula that appeared for the first time on a coin of the Egyptian Mamlūk Sultan al-Mansūr in the year A.H. 778 (A.D. 1377),[26] and which only became a regular feature of Turkish coins after A.H. 790 (A.D. 1388), which is a date that is far too late to allow us to ascribe these coins to the Sultan al-Ḥasan ibn Sulaimān, who reigned *circa* A.H. 718 742 (A.D. 1318-1341). Besides, the fact that the coins bearing this Sultan's name predominate would also indicate that the hoard was made some time during his reign, and hence must be later than the time of 'Alī ibn al-Ḥasan (A.H. 885–887=A.D. 1480–1482).[27]

[26] See M. Jungfleisch in *Bulletin de l'Institut d'Egypte*, ix (1926-27, pp. 51-5.)

[27] This point is corroborated by the percentage of coins found in another hoard from the Island of Mafia, recently communicated to me by Mr. A. E. Robinson of St. Albans, which, in addition, contains two Portuguese coins of Alfonso V (A.D. 1438-1481). See below *Addendum*, p. 58.

It will be seen from the collation of our two literary sources, given above, that the Arabic Chronicle gives us a much fuller account of the vicissitudes of al-Ḥasan ibn Sulaimān's career as Sultan of Kilwa. Twice deposed from the sultanate by the powerful Amīr Muḥammad, he retired, after an unsuccessful attempt to have himself reinstated, to a place called Maghamghūb (?) [مغم غرب], where he established a small principality. There he was succeeded in turn by his son Muḥammad and his grandson al-Ḥasan.[28]

The following five coins and three glass weights formed part of the hoard.

Mongols of Persia.

1. Bronze coin of Hūlāgū with the name of Māngū (Möngke) as over-lord. Cf. B.M. Cat. VI, no. 1 (*circa* A.H. 658; A.D. 1260).
2. Bronze coin of Muḥammad Khān (A.H. 737–738; A.D. 1336–1337). Cf. B.M. Cat. VI, no. 287.
3. Bronze coin of the same ruler, with ibex in the centre. Cf. B.M. Cat. VI, no. 283.

Uncertain. Foreign (Moslem).

4. Æ ·8; wt. 35·2 grs. (2·28 grms.). [Plate Two 21]
   Obv. Within circle, with outer margin of dots:
   لله To Allah (belongs)
   الملك the Kingdom.
   Rev. Within circle, with outer margin of dots:
   الصبر
   عز
   (The translation of this is uncertain.)
5. Æ ·85; wt. 52·9 grs. (3·43 grms.).
   Obv. Partly obliterated, but traces of legend
   الملك العادل al-Malik al-'Ādil
   Rev. Mostly obliterated; traces of kalima (?) within arabesque.

Although this bears the name of al-Malik al-'Ādil, it is not likely to have any reference to the Sultan of Kilwa who bore that title (no. 29), since it is quite different in style, fabric, and weight from the local currency. Besides, this is a common title on the coins of Moslem rulers.[29]

Glass weights.

1. Black glass, 1·05; wt. 89 grs. (5·76 grms.); in centre, hexagram device like no. 411 in Lane Poole's *Catalogue*.
2. Black glass, 1; wt. 80·5 grs. (5·22 grms.); with traces of a name in the centre, perhaps احمد (Aḥmad) [badly worn].

[28] The present writer hopes to publish an English translation of the Arabic Chronicle of Kilwa since, for those unacquainted with the original, the résumé given by Strong in his edition of the text is quite inadequate.

[29] It may be pointed out, in passing, that the last Sultan of Kilwa on the list (no. 51) was also called al-Malik al-'Ādil according to the tenth chapter-heading of the lost part of the Arabic Chronicle (p. 3 v.)

3. Green glass, 1·05; wt. 89·3 grs. (5·79 grms.); in centre, legend: محمد درهمان (?) *Muḥammad; two dirhams.*

If this last one is correctly interpreted, it is remarkable in having the value "two dirhams" stamped on it. The weight, moreover, is in agreement.

Hoard B

The contents of this hoard are as follows:

1. al-Ḥusain ibn Aḥmad	61
2. Isḥāḳ ibn Ḥasan	320
Uncertain (Kilwa type)	95
Foreign (Moslem)	2
Total ...	478

Although the coins of this hoard are somewhat different in style and fabric from those of the preceding one, yet they are of the same *genre* numismatically, since they have the characteristic rhyme between obverse and reverse, and are also without any particulars regarding date and mint, which is exceptional for Moslem coins. In one respect their form of legend differs from that on the coins of Hoard A, in that there is an absence of any additional formulae, such as عز or سعد or عز نصره. Already in 1927 the British Museum was presented with three examples of this particular type by E. J. Wayland, Esq., of the Geological Survey of Uganda. In a letter from him (dated Dec. 3rd 1926) he states that they were discovered by him in Zanzibar. J. S. Last, Esq., the owner of Hoard B, informs me that his coins likewise emanated from the same place. There is always the possibility, therefore, that they may have no connexion with Kilwa, beyond some family resemblance, all the more so, since neither of the rulers, named on the coins, appears in the Kilwa Chronicles. Nor, for that matter, can they be found included in the dynastic lists of Zanzibar, or among the governors of Pemba, Mafia, or Mombasa. In all probability, then, they were members of some collateral branch of the Dynasty of Kilwa, such as we know of in the case of Sultan Sulaimān (no. 37) and Sultan Ḥasan (nos. 40 and 42) above (see p. 41). But for lack of exact information it is permissible to class the coins, provisionally, under Kilwa, since they definitely belong to what may be conveniently termed the Kilwa Type.

al-Ḥusain ibn Aḥmad.

(الحسين بن احمد)

XVth cent. (?)

I. Æ ·9; wt. 37·5 grs. (2·43 grms.). [Plate Two 19.]
Obv. Within double circle:

الحسين الحسين al-Ḥusain
بن احمد بن احمد son of Aḥmad.

Pellet in the centre of the field.

Rev. Within double circle:

يثق trusts

بالصمد in the Eternal (God).

Pellet in the centre of the field.

Rhyme: *al-Ḥusain ibn Aḥmad*
yaṯiḳu bi'l-Ṣamad.

II. Æ ·85; wt. 40·6 grs. (2·63 grms.). [Plate Two 20]

Obv. As above, but coarser script; small crescent at top; bottom of legend almost obliterated.

Rev. As above.

III. Æ ·9; wt. 44·8 grs. (2·9 grms.).

Obv. Within double circle; legend retrograde:

يثق بالصمد there trusts in the Eternal

الحسين بن al-Ḥusain son of

احمد Aḥmad.

Rev. As above.

(The legends are so badly obliterated that it is useless to illustrate this variety.)

Rhyme: As above, but lines transposed.

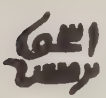
Isḥāḳ ibn Ḥasan

(اسحق بن حسن)

XVth cent. (?)

IV. Æ ·95; wt. 44·4 grs. (2·88 grms.). [Plate Two 17.]

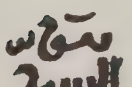
Obv. Within double circle:



اسحق Isḥāḳ

بن حسن (?) son of Ḥasan.

Rev. Within double circle:



ب

يثق بر trusts in the Lord

السنن (?) of Laws (?).

Pellet in centre of field; second line of legend indistinct, but clearer on other specimens.

Rhyme: *Isḥāḳ ibn Ḥasan*
yaṯiḳu bi Rabbi'l-Sunan.

V. Æ ·95; wt. 75·4 grs. (4·89 grms.). [Plate Two 18.]

Obv. Blundered form of the above legend; pellet in centre and crescent at top of field; traces of third circle.

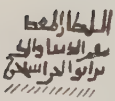
Rev. Legend as above, but much clearer.

The following two "foreign" coins were also found in Hoard B:

1. Æ 1; wt. 59·1 grs. (3·83 grms.).
2. Æ ·95; wt. 57·1 grs. (3·7 grms.).

Obv. Traces of the *Kalima*, or Moslem profession of faith.

Rev. Legend partially reconstructed from both specimens. [Plate Two 22, 23.]



السلطان المعظ[م — the Mighty Sultan

فخر الدنيا والد — Fakhr (?) al-Dunyā wa'

ين ابو الخراسنجى — -l-Dīn Abu'l-Khurāsanjī (?)

These two coins differ altogether in epigraphy and weight from the rest of the Hoard, and are no doubt importations. But to what country, or ruler, they should be ascribed is at present uncertain.

ADDENDUM

Since I examined the above hoards, a third one has been communicated to me, by the kindness of Mr. A. E. Robinson of St. Albans. The owner is Mr. T. M. Revington, who has very generously allowed the British Museum to select any specimens of interest. The hoard came from the Island of Mafia which, as we have seen above, was under the control of the Sultans of Kilwa at one time. The analysis of the hoard is as follows:

Sulaimān ibn al-Ḥasan	17
Dā'ūd ibn Sulaimān...	5
'Alī ibn al-Ḥasan	37
Dā'ūd ibn al-Ḥasan	1
Ḥasan ibn Sulaimān	41
Uncertain (Kilwa type)	15
New type	64
Portuguese	2
Foreign (uncertain Moslem)	2
Total ...	184

Apart from the presence in the hoard of two Portuguese bronze coins of Alfonso V (1438–1481), the only outstanding feature is the large percentage of coins of a new type. Unfortunately the legends on these are considerably obliterated. So far the present writer has only been able to decipher on the obverse the central legend بسم الله الرحمن الرحيم ("In the name of Allah the Merciful, the Bountiful"), and on the reverse, in a very straggling script reminiscent of Mamlūk epigraphy, the fragment of a legend that apparently reads نصر الدنيا والدين *Nāsir al-Dunyā wa 'l-Dīn*. The average weight is about 21·1 grs. (1·37 grms.). The question of their origin remains a problem.

JOHN WALKER

SOME NEW COINS FROM KILWA

Since the publication of the "History and Coinage of the Sultans of Kilwa" in *Num. Chron.*, 1936, the present writer has had an opportunity of examining three more hoards of Kilwa coins, which supplement the information previously recorded. The item of most importance is the presence in the first hoard of a coin of one of the Sultans of Kilwa hitherto unrepresented numismatically. For this reason it may be singled out and described here.

Obv. Within a square the following Arabic legend:

العادل al-'Ādil

محمد Muḥammad

السلطان the Sultan

Rev. Within a square the following Arabic legend.

الظافر Conqueror

بتاييد by the help of

الرحمن the All-Merciful.

Æ ·7; wt. 11 gr. (0·71 grm.).

The Arabic legends are in Naskhi script without diacritic points. The specimen from the hoard is worn very thin and the bottom word on the obverse is practically obliterated. Fortunately another example, recently presented to the British Museum by the Chief Secretary of Tanganyika, verifies the reading given above. The full legend, as is the custom on all the coins of Kilwa already published, rhymes and is as follows:—

al-'Ādil Muḥammad al-Sulṭān
al-Ẓāfir bi ta'yīd al-Raḥmān.

Its weight is 18 gr. (1·16 grm.).

Although the coin bears neither date nor mint indication, the Sultan's name and title are distinctive amongst the known rulers of Kilwa. He can be none other than Muḥammad ibn Sulaimān (no. 29 in the writer's published list of Sultans), whom the Portuguese chronicler Barros calls Mahamed Ladil. According to the Arabic Chronicle this Sultan was given this title *al-Malik al-'Ādil* ("the Just King") as well as the sobriquet of *al-Maṭar al-Jadīd* ("the New Rain"). The Chronicle further tells us that "when he undertook the government everybody adhered to him and the great ones of state obeyed him". His reign was probably about A.H. 825–834 (A.D. 1421–1430). These new coins have the additional interest of bearing the title of *Sulṭān*. Although this is the regular designation of these rulers of Kilwa in the Arabic Chronicle, this is the only case where it occurs on their coinage.

The hoard, in which the above coin was found, was brought to this country by Lieut. C. S. Smith, Vice-Consul at Zanzibar in 1883–1886. Its composition was as follows:—

Kilwa Coins

A.D.	Ruler	No.
c. 1302–1316	Sulaimān ibn al-Ḥasan	22
c. 1341–1364	Dā'ūd ibn Sulaimān	8
c. 1372–1374	Sulaimān ibn al-Ḥusain	1
c. 1421–1430	Muḥammad ibn Sulaimān ...	1
c. 1460	Dā'ūd ibn al-Ḥasan	3
c. 1480–1482	'Alī ibn al-Ḥasan	41
c. 1482–1493	al-Ḥasan ibn Sulaimān	41
	Uncertain Kilwa type	10
	Total ...	127

Chinese coins also in the hoard

1	cash of Chêng Ho period ...	... A.D.	1111
1	,, Hsi Ning ,, ...	... A.D.	1068
1	,, ,, ,,	(in seal character)	
1	,, Shun Hua period ...	A.D.	990–995

Another example of this new coinage of Sultan Muḥammad al-'Ādil [wt. 9·4 gr. (0·61 grm.)] was contained in the second hoard which we shall now describe. This small hoard which came from Kua Mafia was given to the late Sir Horace Byatt when he was Governor of Tanganyika Territory (1920–1924). Through the kindness of Lady Byatt the coins were sent for examination to the present writer and one or two specimens, including the above-mentioned coin, were selected for presentation to the British Museum. The following is an analysis of the contents of the hoard:—

Kilwa Coins

A.D.	Ruler	No.
c. 1285–1302	al-Ḥasan ibn Ṭālūt	1
c. 1302–1316	Sulaimān ibn al-Ḥasan	20
c. 1341–1364	Dā'ūd ibn Sulaimān	1
c. 1421–1430	Muḥammad al-'Ādil	1
c. 1460	Dā'ūd ibn al-Ḥasan	2
c. 1480–1482	'Alī ibn al-Ḥasan	38
c. 1482–1493	al-Ḥasan ibn Sulaimān	49
	Uncertain Kilwa type	2
	Total ...	114

The hoard also contained a bronze coin of Muḥammad Khān, Mongol of Persia, struck at the mint of Shākān in A.H. 737=A.D. 1336.

The third hoard of Kilwa coins had been the property of the late Major F. B. Pearce, the author of *Zanzibar: The Island Metropolis of Eastern Africa.* The coins were sent for examination through the courtesy of his nephew, Mr. Charles T. Pearce. The composition of the hoard was as follows:—

Kilwa Coins

A.D.	Ruler	No.
c. 1302–1316	Sulaimān ibn al-Ḥasan	8
c. 1482–1493	al-Ḥasan ibn Sulaimān	1
?	al-Ḥusain ibn Aḥmad	9
?	Isḥāḳ ibn Ḥasan	28
	Uncertain (of last two types) ...	17
	Total ...	63

In addition there was also included a Chinese cash of the Emperor Shên Tsung, A.D. 1068–1086, of the Hsi Ning period (A.D. 1068) in seal character.[1]

The coin of al-Ḥasan ibn Sulaimān in the hoard has a special interest since it provides us with a variety of legend not recorded in the writer's previous article. Mr. Pearce has very kindly given it, together with one or two more varieties of Kilwa coins, to the National Collection. The coin legends are as follows:—

Obv. Within a circle:

الحسن بن al-Ḥasan son of
سليمان اعلى Sulaimān. May
الله امره Allah exalt his government!

Rev. Within a circle:

المعتمد على relying upon
الله المنان Allah the Bountiful.
عز He is glorious!

Since we are on the subject of Kilwa coinage it may be pointed out that Prince Philippe of Saxe Coburg illustrated[2] two coins of Kilwa which, unfortunately, he mistakenly attributed to the "Pirates Bédouins du Chatt El-'Arab de la tribu des Banou Ka'b". The first is actually a coin of Sulaimān ibn al-Ḥasan (*c.* A.D. 1302–1316); the second one of 'Alī ibn al-Ḥasan (*c.* A.D. 1480–1482).

J. Walker

[1] This coin incidentally is of interest because the reverse die has been displaced and the impression does not correspond with the square hole in the flan.

[2] *Revue Belge de Num.*, 1898, pp. 121-9.

A NEW HOARD AND SOME UNPUBLISHED VARIANTS OF THE COINS OF THE SULTANS OF KILWA

Recently, through the kindness of the Rev. Dr. A. G. Mathew, F.S.A., I have had access to a small hoard of coins of the Sultans of Kilwa, and, by courtesy of the Curator, permission to examine the collection of coins of the Sultans of Kilwa in the King George V Memorial Museum, Dar es Salaam, Tanganyika. I must also acknowledge the kindly assistance of Dr. John Walker, of the British Museum, with some of these coins, but add that the views expressed are my responsibility alone.

Hoard from Kilwa Masoko

The following small hoard was presented to His Grace Archbishop Mathew at Kilwa Masoko in 1951. Although it adds nothing to our knowledge of the coins of the dynasty, it is of a certain importance in that it is the only hoard found on the mainland of East Africa of the medieval period. Kilwa Masoko lies five miles north-west of Kilwa Kisiwani. The coins were found together in a *shamba*. It is still a common custom for natives of Tanganyika to conceal coins in cultivation plots or under the earth floors of their houses.

Its contents are as follows:

W. XI.[1]	Sulaiman ibn al-Hasan (*c.* 1372–4)	1
W. XIII.	Ali ibn al-Hasan (*c.* 1480–2)	2
W. XV.	Daud ibn al-Hasan (? *c.* 1460)	2
W. XVIII.	al-Hasan ibn Sulaiman (*c.* 1482–7, 1488–93) ...	13
	Obliterated—unidentified	7
	Total	25

The predominance of the coins of al-Hasan ibn Sulaiman suggests that the hoard was formed in his reign.

Coins of the Sultans of Kilwa in the King George V Memorial Museum, Dar es Salaam

The coins in the Dar es Salaam Museum do not constitute a hoard, but a collection of coins presented by different people from time to time. They are stated all to have been found either at Kilwa Kisiwani or in the Mafia Islands. It is unfortunate that no precise record of their provenance exists.

The contents of the collection are as follows:

Sultans of Kilwa:

al-Hasan ibn Talut (*c.* 1285–1302)	2
Sulaiman ibn al-Hasan (*c.* 1302–16)	84
Daud ibn Sulaiman (*c.* 1316–18; 1341–64)	31
Sulaiman ibn al-Husain (*c.* 1372–4)...	11
Ali ibn al-Hasan (*c.* 1480–2)	182
Daud ibn al-Hasan (? *c.* 1460)	21
al-Hasan ibn Sulaiman (*c.* 1482–7; 1488–93)	290
Muhammad al-Adil (*c.* 1421–30)	1[2]

[1] *N.C.*, ser. v, vol. xvi, 1936: John Walker, "The History and Coinage of the Sultans of Kilwa". For brevity this is referred to as W.

[2] *Idem*, vol. xix, 1939.

Kilwa Mint:	
al-Husain ibn Ahmad	7
Ishak ibn Hasan	10
Others:	
Fakhr al-Dunya wa'l Din	21[3]
Nasir al-Dunya wa'l Din	1
Mamluk	1
Sultan al-Malik of Aden	1
Alfonso V of Portugal (1438–81)	2
Obliterated	7
Total	672

The collection, albeit not large, thus includes all the Sultans so far known to have issued coins. It makes no contribution, however, to the problem of why the coins of only eight Sultans have been found: there were forty-two of them in all.

The chief interest of the collection is the presence of twenty variants which have not yet been published, together with the coin of an unknown Aden mint. These are:

Sulaiman ibn al-Hasan.

I. *Obv.* Legend as W. III but with a five-pointed star in place of the mint-mark.
Rev. As W. III, but with the mint-mark ⁘

II. As W. IV but without mint-marks.

Daud ibn Sulaiman.

III. *Obv.* As W. VI.
Rev. As W. VI but without the mint-mark, and having the "nun" crossing the final "aliph" of الاحسان

IV. *Obv.* As W. IX.
Rev. As W. IX but having a mint-mark + as on the obverse.

V. *Obv.* As W. VI but with the mint-mark ⁖ instead of ∴.
Rev. As W. VII.

VI. As W. VI, but with no mint-marks.

VII. *Obv.* As W. VI but with the mint-mark ×.
Rev. As W. VI but with a six-pointed star.

Sulaiman ibn al-Husain.

VIII. As W. XI but with a much heavier and coarser form of lettering.

Ali ibn al-Hasan.

[3] This ruler has never been identified. C. H. Stigand, *The Land of Zinj*, 1913, p. 11, without citing any authority, states that "Fikar el Din" was the last Sultan of Mogadishu in the thirteenth century. His incorrect transliteration of the first word tempts one to wonder if he was not similarly mistaken in the second, and that Fakhr al-Dunya wa'l Din is in case.

IX. *Obv.* Within a double circle:

على بن Ali son of
الحسن al-Hasan

Rev. Within a double circle:

يثق بمولى trusts in the Master
المنن of Bounties

X. *Obv.* As W. XIII.

Rev. Within a double circle and having a six-pointed star in the centre of the field and a crescent at the top, legend as W. XIII.

XI. *Obv.* As W. XIII.

Rev. As W. XIII but within a single circle only and having the mint-mark + in the centre of the field, with the legend:

يثق بمولى trusts in the Master
المنن of Bounties—
عز He is Glorious.

XII. *Obv.* As XI.

Rev. As XI but with a six-pointed star in place of the mint-mark.

XIII. *Obv.* As XI.

Rev. As XII but with a much larger six-pointed star, and exceptionally coarse script.

al-Hasan ibn Sulaiman.

XIV. *Obv.* Within a single circle which has an outer circle of dots, legend as W. XVII.

Rev. As W. XXIII.

XV. *Obv.* As W. XVII.

Rev. As W. XXIII. There are seventeen specimens, so that it is hardly a mule in the ordinary sense.

XVI. *Obv.* Within a double circle with an ornament at the top, in an elegant script:

الحسن al-Hasan
بن سليمان son of Sulaiman—
عز نصره may his victory be prosperous.

Rev. As W. XVII.

XVII. *Obv.* Traces of an outer circle, legend as XVI, but in a different form of script.

Rev. Traces of an outer circle, legend as W. XVII, but the script as on its obverse.

XVIII. *Obv.* Within a double circle with an ornament at the top and the mint-mark × in the centre of the field:

بن الحسن al-Hasan son of
سليمان Sulaiman—
عز نصره may his victory be prosperous.

Rev. As W. XVIII.

XIX. *Obv.* Within a double circle:

بن the son of
الحسن al-Hasan
بن سليمان the son of Sulaiman—
عز نصره may his victory be prosperous.

Rev. As W. XXIII.
The word بن —son of—twice is presumably a mistake.

XX. *Obv.* Traces of an outer circle:

الحسن al-Hasan
بن سابمان عز son of Sulaiman—may it be prosperous,
نصره his victory.

Rev. As W. XVIII.

The following coin, which was found either at Kilwa or on Mafia, records an unknown ruler of an unknown dynasty. It is possibly of the fifteenth century.

XXI. *Obv.* السلطان The Sultan
الملك al-Malik
عدن (of) Aden.

Rev. An over-all aster design having eight points each terminating in a fork, with (?) seeds in the interstices. No legend.

The collection includes fifteen mules of which one is of interest, since it is an obverse of Sulaiman ibn al-Husain together with an obverse of Ali ibn al-Hasan (W. XI with W. XIII or XIV). For, since the latter did not succeed to the throne until 106 years after the former's death, it is evident that the mint preserved its dies for a long time.

Where the mint was, whether at Kilwa Kisiwani or on Mafia Island, is still unknown. Although a preliminary survey was made of Kilwa Kisiwani by Dr. Mathew in 1951, no evidence was found. Mafia Island, and the neighbouring island of Chole, perhaps its former capital, have yet to be investigated.

G. S. P. Freeman-Grenville

Correspondence

Sir,

If further evidence of the survival of the Siku ya Mwaka ceremony is required it may be of interest to note that in the years 1951–53 it was celebrated regularly by hundreds of women in Mikindani: I am sure it still is

I have the honour to be
Sir,
Your obedient servant,
T. M. Unwin

808 N. Third Street,
Milwaukee, Wisconsin,
U.S.A.

The Hon. Secretary,
Tanganyika Society,
P.O. Box 511,
Dar es Salaam,
Tanganyika Territory.

Dear Sir,

I see from my records that I owe a balance of Shs. 6/15 on my 1957 dues, owing to an overpayment made in 1956. This in accord with a receipt I have from you numbered 91/56 dated 15.3.56.

I find the rate of exchange a bit confusing, but in making an educated guess I deduce that this amounts to approximately $1.00 US. To be on the safe side, however, since I do not wish to be in arrears, I am enclosing American currency in the amount of $2.00.

If there is a balance remaining, I would suggest that it be retained in any miscellaneous fund that the Society may have, rather than crediting my 1958 account. Next year I will remit the Shs. 20 for the year: assuming that there is no change in the dues structure.

If the Society does not maintain such a fund as I suggest, then the best use I can think of for any balance would be for the Hon. Secretary to have one on me on his way home tonight. I presume this is possible in Dar es Salaam, even as in Milwaukee, U.S.A.

By the by, I would like very much to correspond with residents of the Territory who are interested in big game hunting, either amateurs or professionals, and would undertake to furnish them with various copies of American periodicals dealing with the subject, if they like. If you know of such, and have the opportunity to refer my name and address to them, it would be much appreciated, I assure you.

With all good wishes to you and the Society, I remain

Very sincerely yours,
Robert H. Hammersmith

MINUTES OF THE EIGHTH ANNUAL GENERAL MEETING OF THE SOCIETY HELD IN THE LOUNGE OF THE WOMEN'S SERVICE LEAGUE, DAR ES SALAAM, ON WEDNESDAY, 15TH NOVEMBER, 1956, AT 8.45 P.M.

Thirty Members were present when the President, Mr. A. H. Pike, took the chair.

1. The Minutes of the 7th Annual General Meeting of 3rd May, 1955, and the Special General Meeting of 13th December, 1955, were confirmed and signed.

2. *The Committee's Report.*—The President stated that as the Committee's Report had been circulated to the Members present he did not propose to make any further report himself. He wished to say however that the financial side of the Society had now been straightened out, thanks to the efforts of the present Secretary/Treasurer, and the Society had succeeded, in addition, in repaying its first instalment on the Government loan. Membership was improving but the Society needed at least 1,000 members, instead of its present 739 (paid-up members), before it would be on a really sound financial footing.

Proposed by Archdeacon Capper; seconded by Mr. Nizamuddin, that the Committee's Report be accepted. Carried unanimously.

3. *Election of Office Bearers and Committee Members.*—The following elections were made by unanimous vote:

President: Mr. A. H. Pike (re-elected).	Proposed Mr. Clifford. Seconded Archdeacon Capper.
Vice-President: Mr. G. N. Cassam (re-elected).	Proposed Mr. Pike. Seconded Mrs. Organ.
Honorary Editor: Mrs. R. L. Paterson.	Proposed Mr. Clifford. Seconded Mr. Wylie.
Assistant Honorary Editor: Mrs. J. A. K. Leslie.	Proposed Mr. Clifford. Seconded Mr. Wylie.

Honorary Secretary/Treasurer: Mrs. R. Clifford (re-elected until her departure on leave); Mrs. D. C. Hill as from 1st January, 1957.

Proposed Mrs. Pike.
Seconded Mrs. Soper.

Committee Members	*Proposed by*	*Seconded*
Mr. Wylie	Mrs. Pike.	Mrs. Soper.
Mr. Wenban-Smith	Mr. Clifford.	Mrs. Pike.
Mrs. Organ	Mr. Pike.	Miss Gray.
Mr. Chande	Mr. Nizamuddin.	Mr. Pike.
Mr. Haldane	Mrs. Tilney.	Mrs. Paterson.
Miss Harding...	(Curator, King George V Museum).	

It was noted that the Museum Committee would be required to nominate one of its number to serve on the Society's Committee.

4. *Treasurer's Report.*—This had been circulated with the Committee's Report and to it was attached a statement of Income and Expenditure which had been approved by the Auditor.

In reply to a request that a Balance Sheet be issued the President replied that for several reasons it had not been possible to prepare one for 1955; the Accounts were however in order and had been audited and a Balance Sheet would be prepared for the 1956 Accounts. Proposed by Mr. Chande; seconded by Mr. Wylie that the Treasurer's Report and Accounts of the Society be accepted. Carried unanimously.

5. *Appointment of Honorary Auditor.*—The President said he would ask the Director of Colonial Audit if he would be so kind as to continue to act as Honorary Auditor to the Society.

6. In conclusion the President thanked the Honorary Secretary/Treasurer on behalf of the Society for her work over the past eighteen months to put the affairs of the Society in order.

There being no further business the Meeting closed at 9.15 p.m., and those present attended a lecture and film by Mr. Mitchell-Hedges on photography during the recent Royal Visit to Tanganyika.

Dar es Salaam,
15th November, 1956

MARY CLIFFORD
Honorary Secretary/Treasurer